2018 INTERTECH™ TECHNOLOGY AWARDS

Congratulations to these InterTech Recipients for their company's inspiring innovations.

Honoring the development of innovative technologies for graphic communications and related industries.
2018 InterTech Recipients

For 40 years the awarded technologies have been a harbinger of the trends altering the future of our industry. Since 1978, the InterTech™ Technology Awards have honored technologies predicted to have a major impact on graphic communications and related industries. Past honorees have introduced entirely new products and services that have revolutionized ways of working and enabled printers to operate more efficiently.

This year we are pleased to present the twelve 2018 Printing Industries of America InterTech™ Technology Awards recipients presented for consideration from a roster of twenty-nine technological innovations. This premier program recognizes emerging technologies that have a significant impact on the advancement of the graphic communications industry.

The InterTech competition is conducted annually by Printing Industries of America to showcase and encourage continuous development of new products and technologies that aim to improve the industry, increase production quality, and foster operational excellence. Each entry is examined by an independent panel of judges against the following criteria. First and foremost, the technology must be truly innovative—not just an evolutionary improvement to an existing product. Further, it needs to enable printers to operate more efficiently or provide new products or services with a clear return on investment. Finally, the product or service must be commercially available, yet not be in widespread use.

The judges review each technology entry and then gather to vigorously debate their “breakthrough” nature. We assume all of the technologies are excellent performers, but the argument lies in which ones are truly innovative.

Jim Workman
Vice President, Center for Technology and Research
CloudLab was established in 2013 and has managed to build up an impressive client base ever since. One of CloudLab’s biggest customers is Cimpress. Cimpress was founded with one goal in mind: To make high-quality customized print products for all businesses, including small ones with limited budgets. Since 1994, the company has offered mass customization for businesses of all sizes, but those small jobs recently became easier when Cimpress began using printQ 3D Packaging Design software. The printQ 3D Packaging Design extension helps the company build, design, and customize intricate products autonomously and completely. This makes it much easier for Cimpress to fulfill its mission.

The reason it’s easier? printQ solves the long-time problem facing personalized die-cut packaging by reducing the cost-intensive and complex nature of it. For years, creating personalized die-cut packaging took a great deal of time because of a process that included long customer wait times for creation, approval, corrections, and final approval. But thanks to printQ 3D Packaging Design, printers have customized technology that can easily be streamlined to produce personalized packaging. Now a process that took days or weeks can be finished within hours if not even minutes. This flexibility means anyone can build and personalize packaging products to the size and specifications they desire. Also small and medium-sized companies can easily use personalized branded packaging for their products.
printQ 3D Packaging Design allows anyone to instantly create a customized die-cut, see it in 3D, and map a 2D object onto a 3D object, providing a complete WYSIWYG personalization. The 2D die-cut custom template can be based on a variety of parameters, such as width, height, depth, and thickness. What's more, the templates work by using a responsive design approach for any kind of size. This state-of-the-art software engineering allows solutions that meet every customer's unique needs.

Even amateurs find the 2D editor to be very user-friendly, making it easier for anyone to adapt their market strategies based on custom packing design. The editor automatically maps the customized 2D die-cut onto a 3D object on the screen so that it is easy to fold, rotate the design, apply graphics, and switch between 2D and 3D mode. This provides customers with detailed looks at the use, aesthetics, and viability of the product, allowing changes before an approval process. While mapping 2D die cut-texture to a dynamic 3D rendering was always a technology challenge, printQ's specially designed algorithm makes it easier to visualize it.

The 3D Packaging Design allows a web-to-print solution, and anyone can design custom-sized packaging and approve artwork themselves. It immediately produces pre-approved files that are used to start production of the packaging, which can be sent straight to the printing equipment. This translates to cost saving for development and design work. It also makes it possible for almost anyone to design customizing packaging, freeing up valuable resources. The web-to-printing feature with online design functions and pre-approved artwork allows for immediate and streamlined print production process and workflow. Additionally, users have access to CloudLab's own cloud-based CAD system, which provides superior production value than currently available CAD software.

Customers also like that the editor library provides ECMA packages, which help them build a foundation for their own design while adding their own branding elements. It allows for a variety of graphic content and customizable sizes and shapes for the products as well as customized sizes and shapes. But the dynamically created 3D model provides a variable sized packaging product design that meets individual requirements and artwork. The instant preview generated enables people to see what they will be printing: a realistic 3D image of their packaging product. All of this combines for a superior end product.
A REVOLUTION IN WEB TO PRINT

Come visit us at print18 in Chicago, Booth #620 near the entrance. Experience yourself why the judges of the 2018 InterTech™ Technology Award and the judges of the 2018 European Digital Press Award were so impressed with our 3D Packaging Design Extension.

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Mal McGowan, founder of McGowan’s Print in Ireland, always saw the value in digital printing and sought out new technologies to help his business. This tradition started almost immediately after he founded his business in the 1980s, when he used a Mac to produce color photocopies. As the technology developed, so did the qualities of the products he provided and McGowan continued searching for emerging technologies that would improve his business. Again, he looked toward the latest technology when the company was searching for a press that would make their corrugated products stand out from the competition—they did not want to provide merely acceptable print quality. That’s when they turned to the EFI Nozomi C18000, a single-pass corrugated digital press. McGowan was on the cutting edge in that his press was only the second one in use worldwide.

“The print jumps off the board, and there’s a real ‘wow’ factor. You can tell a Nozomi print from a mile away,” he said. The EFI Nozomi C18000 helps printers tackle the unique challenges of corrugated packaging printing to provide a cost-effective, on-demand solution that allows for fast-cycle proofs and prototypes. This means more customized campaigns completed with digital printing and an increase in productivity across every area of the corrugated manufacturing process. With print speeds up to 246 linear feet per minute, the press is a highly efficient digital solution. What’s more, this press allows even the smallest jobs to look as brilliant as the most expensive, detailed job.

Often in corrugated packaging printing world, manufacturers must adapt the inkjet technologies used for signage or documents. This means the press truly isn’t made to address the unique needs of corrugated packaging. That’s why the EFI Nozomi C18000 offers a superior product—it was designed specifically with corrugated packaging in mind.
The EFI Nozomi C18000 single-pass press is 71-inch wide ultra-high speed. A single operator can run the press, unlike other corrugated production lines. The press has a single-pass, piezo grayscale inkjet printhead system that provides accurate, high fidelity color. Available in either four-color or six-color configuration of Genuine EFI Inks, each version provides high quality, expanded gamut imaging with matte, satin, or glossy finishes. The inks are odorless and withstand rubbing and other wear and tear. The Nozomi’s permanent head architecture extends the print head life and increases press up-time. The inline image quality inspection system manages inkjet nozzle alignment and uniformity errors, and an inline primer helps printers control dot gain and ink absorption, essential for the different type of corrugated top sheets. Also, the programmable top- and bottom-feed systems tackle media separation, lift, transport, and alignment all at full press speed. The Nozomi also works with a wide variety of board including everything from 14-point cardstock to a full range corrugate flutes to triple wall. Optional to the press is the EFI Corrugate Packaging Suite MES that helps manage plant-wide integration of digital production as well as EFI Escada corrugator control solutions.

The EFI Nozomi C18000 provides superior print quality, matching that of offset laminate at incredibly fast speeds to transform the future of corrugated packaging.

† JUDGE’S COMMENTS

“With the EFI Nozomi press, companies can shift work litho-lamination to direct-to-board printing, which means no outsourcing delays and a one-step and very high-quality single-pass grayscale imaging. Which means more jobs completed in less time and a faster time-to-market for new packaging designs.”
ScreenPro

Global Graphics • Cambridge, United Kingdom

ScreenPro improves inkjet output quality for any inkjet press that uses any workflow, type of ink, combination of print heads, and electronics. It provides high-quality printed products without sacrificing speed. The multi-level screening engine improves the print quality from inkjet printing heads, which allows ScreenPro to accelerate the development of the OEM’s press. This reduces time to market, which results in huge savings for companies.

While digital inkjet provides many benefits over conventional printing, many print shops hesitate to use digital printing because the quality still seems inferior to traditional printing. This affects the label and package marketing particularly. When printers asked for help in improving the output quality of their presses, ScreenPro was developed, initially using dispersed screens from the Harlequin RIP.

Now a standalone engine ScreenPro uses Mirror and Pearl screens and continually adjusts for quality. It corrects common imperfections, such as streaking and mottling, which improves the quality of the inkjet in an efficient and cost-effective way. This allows for printers to achieve required print quality, so they can produce more jobs than previous presses could ever achieve. What’s more, it keeps up with digital presses so that printers can run at full speed without wasted time. ScreenPro scans using a data pipeline to the drive electronics in real time, allowing for speeds that match the press. This increases data transfer and removes any slowdowns when writing to a disk, helping ScreenPro to meet demanding speed and quality criteria.

As an example of ScreenPro’s ability to overcome speed performance barriers, it was the solution that press manufacturer Mark Andy used to take advantage of the speed of its Digital Series HD hybrid press. While the press was engineered to print thousands of pressure-sensitive labels each minute, that...
was an unsustainable pace when producing full color labels with complex variable data. Work could not be processed and sent to the press fast enough to avoid slowdowns. Mark Andy found that ScreenPro reduced process and RIP times by 50%, allowing the company to optimize its workflow and press capabilities. The Digital Series press now has no limitation on the amount of VDP elements on one imposition and benefits from ScreenPro’s ability to improve inkjet print quality.

ScreenPro employs halftone patterns that decide the combination of dot sizes to use for a given level and uses advanced inkjet screens to create the thresholds and overlaps to produce numerous ink drop sizes. This helps create an optimized print condition. What’s more, the Pearl Advanced Inkjet Screen offers a highly-developed dispersed screen that creates natural images on more or less absorbent substrates by targeting chaining and streaking artifacts. These artifacts, often found in mid- and three-quarter tones, occur when drops pool along the surface. The Mirror Advanced Inkjet Screen works with a microstructure to counteract mottling, or what’s known as the “orange peel” effect. This occurs when solid colors are used on non-absorbent or poorly wetting substrates, such as tin cans, plastics, or flexible packaging.

What’s more, ScreenPro is also available as a cross-platform development component and an application with fully brandable user interface. All of this works in sync to improve speed and consistency for every project.
As Multi Packaging Solutions searched for a press to produce new products and services it couldn’t offer before, they looked to the Primefire 106. Soon they were adding personalized printing, increased flexibility, and lower minimum order quantities. Thanks to the Primefire 106, Multi Packaging Solutions is pleased with its current folding carton printing process.

As the first commercially available B1-format industrialized sheetfed inkjet press, the Primefire 106 makes folding carton printing easier than ever and provides high-quality products in a fraction of the time. By using a seven-color rendering technology, the Primefire reduces the need for Pantone spot-color inks, which have become common in folding carton printing work. This advancement reduces the complexity and expense of many jobs. The Primefire’s technology uses a newly designed, Heidelberg-developed control that manages up to 12 billion drops of ink per sheet, all while rejecting defects and correcting the sheet without stopping the press. This allows for quality monitoring that enables print availability uptime better than 80 percent and reportedly above that of competitive half-size digital printing presses.

The Primefire offers numerous advantages over other digital press formats. Folding carton manufacturers can proof short runs or test markets with the same print file and nesting before production, which can add up. It also reduces investment and tooling costs per job because it uses existing, same-format die-cutting for postpress capabilities. Additionally, it offers real-time production choices for digital or offset with true matching print quality, registration, and consistency. Manufacturers appreciate its ability to allow for migration of offset to digital runs below 2,500 sheets, all at a total print cost savings. And, it is easy to leverage sheetfed press components into a modular platform, allowing customization in offset or flexo printing. The Primefire was designed with upgrades in mind and can be enhanced as new technologies become available.
Thanks to technological advances, the Primefire offers folding carton manufacturers several advantages that keep them competitive in an ever-changing market. A specially developed Heidelberg-patented monitoring system detects irregularities in sheets such as dog ears, tears, or double feeds. All of this occurs in real time, including moving the inkjet heads out of the way without stopping the press, providing higher production speeds with less downtime without flawed products. The design improved the integration of an inkjet format that performs with 80-percent plus print-ready time and runs up to 1.5 million sheets per month without defects and with color consistency. Direct-to-sheet, seven-color one-step inkjet creates unmatched color-to-color accuracy and color consistency for long runs while achieving better than 2 delta-E across the color gamut. And, the jetting module uses real-time monitoring of 175 inkjet head nozzles firing 2 picoliter drops up to 12 billion drops of ink per B1 sheet, all the while ejecting defective sheets and reprinting in real time. All of this increases efficiency. Additionally, the quality control system employs nozzle-drop-out compensation so that immediate correction and reprinting can occur. The automated controls of the Jetting Module ensure inkjet head life of up to eight years while reducing maintenance costs and service times. What’s more, the press prints and ejects a sample for analysis in the Prinect Press Console without stopping the job, which is the first time a B1 format digital press has had such capability.
Creating great product packaging goes far beyond simple printing. A ready-to-pack product requires finishing processes, like lamination and coating, that can potentially add days to the production cycle, negating any time gained during the digital printing process. HP Indigo Pack Ready Lamination can eliminate this production lead time challenge.

Pack Ready Lamination is an energy efficient, chemical-free digital system that allows converters to meet the growing demand for fast time to market, increase throughput, and reduce total costs with zero curing time for lamination, as well as a significant reduction material waste at job changeover. Traditional flexible packaging can take up to 10 days to go from printing to sealing, and a typical ready-to-pack product requires days of lamination, coating, and curing. HP Indigo Pack Ready Lamination is the first and only non-adhesive lamination solution for flexible packaging, thus requiring no time for curing. Rather than use adhesives, the Pack Ready Lamination system applies a thermoplastic polymer layer that is heat
activated, bonding to an HP Indigo ElectroInk printed layer. By adding pressure and using a cooling process, a strong and long-lasting bond is instantly formed at the molecular level, resulting in a combined laminate film that is ready to be slit and heat-sealed for pouches immediately. Brands can move fast and get products to the shelf faster than ever before.

Designed with the environment and consumer in mind, all Pack Ready films are food contact grade quality and comply with key global food packaging safety regulations under well-defined conditions of use. Since Pack Ready Lamination does not use adhesives, there is no migration risk that chemicals, such as isocyanates, will come into contact with the product, and the production environment surrounding Pack Ready remains clean. Pack Ready Lamination results in up to 10 times less waste compared to adhesive lamination. Since this reduces waste during job changeover, Pack Ready can make short to mid-size runs more economical. The energy efficient process with no dry time significantly lowers the environmental impact and the carbon footprint of converters using Pack Ready Lamination.

Available since May 2017, the HP Indigo Pack Ready Lamination solution is easy to learn, operate, and maintain and has a low hardware cost, making it a great option for experienced converters; in addition, it provides an opportunity for newcomers to expand their application range to laminated products.

Given the nature of digital runs, the no cure-time, and vast reduction in waste, Pack Ready Lamination is an innovation worth recognizing.
Rapida LiveApp
Koening & Bauer North America, Inc. • Dallas, Texas • www.koenig-bauer.com

In today’s hyper-competitive market, printers require an edge to gain more efficiency in the pressroom, eliminating unnecessary functions and reducing simultaneous functions between jobs. With print runs getting ever smaller, printers need the shortest possible makeready times.

Koenig & Bauer’s Rapida LiveApp takes press operation management from a fixed console and puts it directly in the press operator’s hand, ensuring the operator keeps the press in production and keeping him or her informed of each job in real time. The app manages everything from maintenance to inventory to environmental sustainability, allowing the press operator to keep an eye on production from the press floor, the break room, or the office.

This easy, user-friendly app helps to increase automation and standardization of press operations, and because it is completely customizable, operators can tailor the app for their own standard operating procedures. Rapida LiveApp brings press crew and production management staff together to produce the best product for the customer, and it runs on an ordinary smartphone, meaning there is no need to purchase a specialized device.

The app offers 24/7 remote maintenance, putting Koenig & Bauer’s remote staff on call if a problem arises. With photos and live texting with staff, press problems are quickly diagnosed and fixed, leading to less press downtime due to maintenance.

Through the use of NFC tags, a printer can use Rapida LiveApp to maintain and track consumables, such as ink and paper, connecting them to a specific job and increasing inventory control. Production managers can receive an automatic warning when inventory levels drop below
a defined minimum or have the system automatically reorder more. The app will also forecast consumables and stock production.

Rapida LiveApp can assist press operators in evaluating their environmental impact, helping print shops to increase the effectiveness of their sustainability efforts. The app provides real-time information on energy consumption per job, as well as the equivalent carbon emissions per 1,000 sheets.

Along with individual printers, Koenig & Bauer’s Rapida LiveApp can help the industry as a whole by becoming a training device to address the lack of skilled press operators. Operators can learn through video content, press manuals, and other resources that all come pre-loaded in the app.

All data collected by the Rapida LiveApp is immediately available for tracking purposes or inventory management. All of the information in the mobile console is available on other Koenig & Bauer production management tools, so all employees have the same information readily available no matter where they are.

The only mobile console for press operators in an environment where every second counts toward the bottom line, Rapida LiveApp is a technological breakthrough that can put a print shop at the forefront of the 4th industrial revolution and improve customer satisfaction through total job transparency.

**JUDGE’S COMMENTS**

“The Rapida LiveApp shows the power of apps to add value in the pressroom. The judges found the entire app innovative, especially noting its ability to track and communicate maintenance issues and provide easy access to training resources.”
Anti-Fluting Plate Technology for Corrugated

MacDermid Graphics Solutions • Atlanta, Georgia • www.macdermid.com/graphics

Waves belong on the beach, not on a printed piece. Fluting—the washboard effect—has long presented a challenge in corrugated printing, and MacDermid Graphics Solutions has designed a simple and effective solution: Digital MAF plate.

The “anti-fluting” plate is a new digital flexo printing plate with a dot profile that is optimized for post print corrugated, resulting in dramatically reduced fluting without the use of additional platemaking techniques or exposure systems.

Previous flat-top platemaking innovations improved appearance but increased production time and materials costs. Digital MAF improves upon MacDermid’s LUX® Lamination technology by removing the lamination step altogether while maintaining and improving dot structure integrity. Platemaking is made easier by a reduction in materials and steps, which in turn reduces the time and cost of platemaking. With this technology, platemakers can use any UV device without modification. Overall, Digital MAF provides a more consistent plate quality while optimizing productivity and efficiency.

Digital MAF provides the best of both worlds—stability of the dot structure and sharper elements—thanks to the photopolymer plate package, which has a flat-top dot (FTD) with a shape designed for corrugated media.

A true mix of chemistry and dot geometry, Digital MAF technology requires no additional equipment. Printers simply use Digital MAF’s photopolymer plates. By using this anti-fluting technology plate, printers bypass the steps of inserting and removing the LUX® Lamination Membrane and
achieve the same (or better) flat-top dot digital plate. The number of steps for a standard digital plate and FTD digital plate are the same, but the result is markedly better.

Digital MAF reduces steps, reduces dot gain, and provides faster press speeds. Plates are extremely durable and chip-resistant. Because there is no cupping, printers will achieve a uniform impression at all process speeds.

For thinner liners and recycled products, the LUX® ITP™ MELO plates have a soft durometer, leading to minimal board crush on a lower-quality board while still maintaining the anti-fluting technology that provides such clear images on corrugated materials.

To use Digital MAF and LUX® ITP™ MELO, only a digital imager and a conventional sheet exposure unit is needed. No longer do printers need a laminator, lamination media, or exposure to inert gas or high intensity UV to achieve a clear image on corrugated media. Digital MAF is not recommended for oil based inks, hydrocarbon solvents, or inks with acetate contents higher than 20 percent.

MacDermid’s anti-fluting technology platform helps printers achieve better and more consistent plate print quality while optimizing platemaking productivity and efficiency.
Brand owners and their print service providers (PSPs) can produce attention-getting personalized decorative embellishments with a level of productivity never available before, thanks to MGI’s JETvarnish 3D Web press.

This is the first web-fed digital enhancement press on the market. It allows label printers to increase capability for short runs, increase customization, turn around jobs faster, and expand flexibility to generate higher-margin label, tag, and flexible packaging jobs featuring variable varnish, foil, and data.

The judges complimented the technology’s ability to foil emboss flexible packaging, laminated films, shrink-sleeve plastics, and synthetic pouch materials. Traditional analog hot foil stamping methods cannot be applied to these types of substrates and materials because the heat and pressure of the stamping process would deform the stock. However, the 100% digital process allows for variable data embossed foiling with individually personalized alpha-numeric text and images on every piece.

Designed for both 2D and 3D-embossed spot coating on flexo, offset, or digital web-fed printed output, the JETvarnish 3D Web uses a technology that reduces waste by ensuring that every piece of foil is used economically, minimizing foil production and maximizing inches on every foil. Hot foiling also can be added, allowing glamorous metallic and colored foils to embellish label designs.

Press operators can manage costs on every job down to the penny and provide accurate job estimates to customers, as well as manage inventory and work schedules to get the most from their press. Operators can use the Image Editor graphical tool to quickly edit job files and manage the special effects to create prototypes quickly. This allows production staff to quickly adapt to changes without needing to go back to prepress to re-design the file or begin the prototype process again.

JETvarnish 3D Web’s AIS SmartScanner uses advanced logic algorithms to process up to 5 billion image operations and inkjet print management functions every second. It also reduces job setup times and makeready waste, allowing for faster prototyping and production runs. The SmartScanner scans and maps the entire target print area and adjusts inkjet heads accordingly. The scanner can correct any difference between the label and the print file on the fly and adapt to a new label immediately.
MGI’s technology has features that make it an environmentally sound choice. Rather than wasting time and resources cleaning, the MGI JETvarnish 3D Web has automated maintenance functions and eliminates some manual maintenance completely. Everything recirculates in the closed-circuit system. Because there are no plates or screens, there is no material waste between jobs and the varnish used is solvent-free with no VOCs. The UV dryer features LED lamps that last 5 times longer than conventional lamps and has low electrical consumption.

The MGI JETvarnish 3D Web has no setup time, no waste, and delivers the first label in registration. Because everything is done on one machine, 3D Web customers have reported increases of throughput production job completion between 200 to 400 percent for embossed foil applications. Customers also have reported profitability margins of 80 to 200 percent over traditional systems.

A digitally finished label by the MGI JETvarnish 3D Web solution provides eye-catching sensory enhancements and dramatic tactile sensations that distinguish brands and products in the marketplace.
A technological advancement still in its infancy, Sleeking technology has the potential to revolutionize foil stamping, spot coating, and laminating.

Around 2011, 3-Step Sleeking, a revolutionary development that allows for variable-data foil stamping, was developed. Sleeking is the ability to bond metallic foils and spot coatings to digital ink, specifically HP Indigo inks and a few other digital toner-based inks. What makes Sleeking special is the combination of adhesive foils and films that only bond to Indigo/digital inks when combined with the proper heat and pressure settings on a Sleeking laminator.

In 2017, two major enhancements to the original technology arrived: 4-Step Sleeking and Over-Printable Variable-Data Foiling. 4-Step Sleeking is the application of Sleeking technology over laminate, which allows nearly any stock to be used and creates amazing contrasts and special effects. In this process, the background of the artwork is printed first and is followed by over-laminating the sheet with a special Indigo/digital ink print-friendly laminate in either Karess Printable (soft feel) or Gloss Printable versions.

Once laminated, the sheets are run again through the press to apply ink anywhere that the foil or spot gloss, matte, or holographic film will be applied. The final step is to bond the foil or spot coatings, which only adheres over the areas that have ink. This process enables variable-data applications, bonding the foil or coating to the areas only where there is ink, meaning that every sheet can be different.

Over-Printable Foiling is a revolutionary innovation. The special silver foil used in Sleeking accepts standard HP inks, which means that any color of foil can be created by simply printing any combination of CMYK Indigo inks on top of the silver foil. Any image or any color of metallic foil (or multiple colors of foil) can be achieved in one pass through an Indigo press.

**USER COMMENTS**

“We have just begun to ‘master’ the machine’s capabilities and have watched more and more companies desire it—‘to keep up with this Joan.’ We could not ask for a better partner and supplier than Nobelus.”

JOAN D. ESCOVER
President, JP Graphics
Sleeking technology removes the most time consuming and costly portion of the traditional foil stamping process: dies. These typically expensive items often require outsourcing, offer few variable-data options, and must be stored. Sleeking can be achieved on a specially equipped Sleeking laminator, which allows printers the ability to insource not only their foil stamping and spot coating, but their laminating needs as well, boosting turn times and profit margins. It also eliminates the need to stock hundreds of little rolls of foil in different colors—simply use silver foil and print any color desired.

Production Sleeking has a relatively low cost to enter with a small-format production system. Sleeking systems have all the functionality for one-sided laminating, running anywhere from speeds of 50 to 100 feet per minute, and are able to run laminate two-sided in a work-and-turn scenario. For most users, this means they can insource nearly all of their laminating as well.

4-Step Sleeking and Over-Printable Foils can be applied most places where traditional foils are used. Product categories showing the highest impact and potential for Sleeking technology include high-value foil products (like wedding invitations, greeting cards, and more); security applications that need foil to deter counterfeiters; personalization on books (such as corporate reports, school annuals, and photo books); foil stamped personalization on direct mail; and foil stamped packaging. The application of foil with variable data and personalization is now easier than ever thanks to Nobelus’ innovative 4-Step Sleeking technology.

**USER COMMENTS**

“In the six months since installation, we have produced multiple eye-catching products that have allowed us to stand out from our competition within the industry. Our clients have been very excited regarding the increased possibilities and creativity they can now achieve with their print designs.”

JOE OLIVO,  
President, Perfect Communications
In a marketplace where demands for higher print quality and tighter color specifications are ever increasing, Techkon USA’s SpectroDens4 raises the bar (and measures it reliably and accurately) for spectro-densitometers.

A hand held scanning spectro-densitometer, this instrument offers a new, fully ISO 13655-compliant measurement head and is able to switch between spot measurements and color bar scanning—up to 43 inches long—without the need for additional accessories. SpectroDens4 is technology that can simplify the complex process of measuring, managing, and delivering perfect color—at an affordable price.

SpectroDens4 maintains its predecessor’s claim as the fastest hand held spectro-densitometer on the market, allowing a single spot measurement approximately every second. Its patented, side-aperture design allows the operator to easily position the optics over the desired measurement location for even faster operation. Unlike conventional pressroom spectrophotometers, which only sample a color in 10-nm increments from 400 nm to 700 nm, the SpectroDens4 samples color in approximately 3-nm increments from 340 to 850 nm, providing more than three times the resolution of conventional devices. This higher sampling rate provides a more precise spectral characterization of the measured color sample and therefore more precise color measurements (which are reported in 10nm increments as required by ISO 13655), such as spectral reflectance, CIELab, density, tone value, etc.

Along with the technology, its hardware is also designed for performance. The new uni-body case, which has no moving parts, is precisely machined from a single block of aluminum to maximize durability and reliability in harsh production environments. It is ergonomic, making it comfortable for all-day use. It is also fast—tracking wheels make it possible to quickly scan color bars up to 43 inches long and switch between spot measurement and color bar scanning.

**USER COMMENTS**

“The SpectroDens4 design makes it a snap to take readings quickly and accurately, saving major time while analyzing dozens of printed sheets a day.”

ERIC BECKMANN, SR.,
Director of Technical Service East, INX
scanning modes with the click of a button. The device uses a differential encoder to sense the scan speed and distance for flawless color bar measurements every time.

A rechargeable battery offers longer use between charges. Faster, wireless inductive charging means no exposed electrical contacts allowing for greater ease of use, reliability, and maintenance-free charging for the life of the product. SpectroDens4 has National Institute of Standards and Technology (NIST) traceable calibration and metrology.

Other features include:

- InkCheck, which provides press operators specific ink density adjustments to obtain the lowest Delta-E color match
- Support for G7 workflows with specific gray density adjustment recommendations
- 3-mm round aperture with an optional 1.5-mm aperture that can be changed by the customer
- Pass/Fail indication against ISO printing and proofing standards
- True Wi-Fi connectivity to computers, offering faster communication speeds, enhanced security, and a much greater connectivity range as compared to other measurement devices that only use Bluetooth

Offered in three instrument configurations—Basic, Advanced, and Premium—SpectroDens4 can yield dramatic gains in quality, productivity, and cost savings. Managing color in the pressroom with a few skilled eyes is simply not enough anymore to satisfy customer demands and survive as margins for printers continue to erode. SpectroDens4 is a valuable weapon in the fight to eliminate color problems, reduce makeready costs, and achieve a higher level of color quality.

**USER COMMENTS**

“I find the SpectroDens4 to be an essential part of the toolkit and use it for print evaluation on a daily basis. The old Dens was great, but the new Dens4 surpasses any other instrument available in terms of features and usability.”

**RON ELLIS,**
**Ron Ellis Consulting**
Time is money, and the new digital Iridesse™ Production Press from Xerox® eliminates the multiple presses and processes usually required for print embellishments, increasing capacity and profits for customers. A high-speed, six-station color press that combines four-color printing with up to two specialty dry inks in one device, Iridesse combines the value of highly automated, agile digital production with exceptional image quality and impressive embellishment effects.

The Iridesse gives print service providers (PSPs) an immediate competitive edge in the growing digital print enhancement market and provides a rapid return on investment as PSPs' profit margins on such embellishments can increase as much as 50 to 400 percent, according to Keypoint Intelligence-InfoTrends.

The only digital press that can print metallic gold or silver dry ink, CMYK, and clear dry ink in a single pass, Iridesse makes it easier than ever to unleash the potential of print and achieve brilliant results. With two inline specialty dry ink stations, customers can create lucrative applications with spot colors, metallic and mixed metallic gradients, and specialty enhancements. Gold and silver dry metallic inks can be used on their own or layered under or over CMYK to create unique iridescent palettes. A layer or multiple layers of clear dry ink can be added for an extra touch of dimension or texture.

Printing at speeds up to 120 pages per minute, the press can run stocks from 52 to 400 gsm. Dual advanced high-capacity feeders, bypass, and inserter options can allow up to eight different stocks in a single job or do production runs with a total of 12,500 sheets.

The High Definition Emulsion Aggregate Toner process delivers lower gloss, smooth tints, and fine detail more consistently while the Xerox EX-P 6 Print Server by Fiery enables ultra HD resolution output and provides customized workflows for metallic applications with advance RIP capabilities and color management tools.

Iridesse maintains its high quality through finishing with a variety of available options, such as the new Xerox Crease and Two-Sided Trimmer, which adds the ability to produce

**JUDGE’S COMMENTS**

“The judges considered the ability to print CMYK plus multiple metallic dry inks in one pass, at full press speeds and in extra sharp resolution, to be truly innovative. They noted that producing special effects on the press is further enhanced by the ability to quickly swap inks to different positions.”
professional-level booklets on a variety of uncoated, coated, and heavyweight paper stocks.

The key to Iridesse’s impact is Color FLX Technology, a major technical innovation that saves time and quickly and economically creates a wide range of specialty effects over traditional offset or foil stamping methods. Its architecture eliminates the need for multiple passes and the registration problems that can arise from them. Designed into Color FLX Technology is EZ Swap capability, which enables fast, efficient Specialty HD EA Dry Ink changeovers so high-value print embellishments can be varied and executed more easily with no maintenance or clean up. Color FLX Technology is easy to implement at the digital front-end using FreeFlow Core or by the designer using tools like the Xerox Design Guide. The press makes the printing of iridescent hues efficient, and it creates print samples that are visually stunning.

Since its release in May 2018, Iridesse has put metallic colors and enhancements within the reach of many smaller print clients by allowing enhancements on very small print runs in an efficient and cost-effective way, something that has never been available before. Previously expensive techniques are now in the reach of every client. The Xerox Iridesse Production Press offers all the benefits of a digital press—personalization, economical short runs, and agile production—with high-value inline capabilities that create visually stunning imagery in a single pass. Iridesse makes it easy to create more “wow” per page, solidifying print’s place in a client’s campaign plan and capturing new revenue.

“With Iridesse, we can create remarkable and eye-catching ads, cards and posters with a simple setup and at high speeds. I’ve been in the print trade for 35 years now and I’ve never known a digital machine like it.”

GLEN ROBINS,
Sales Director, IPW1
The only omnichannel communications solution that brings together a marketing automation workflow and individualized content.

2018 InterTech™ Technology Award Recipient

"With XMPie Circle we are future-proofing the print industry. Our customers have the technology to transform their print businesses into successful omnichannel print and digital communication providers."

Jacob Aizikowitz, President of XMPie

Scan this QR code to learn how XMPie Circle can help you manage your print and omnichannel communications today:
www.xmpie.com/CircleAutomation
BREAKTHROUGH BRILLIANCE.

Meet the world’s first xerographic press able to print mixed metallics with 6 colors in a single pass – the Xerox® Iridesse™ Production Press. Command attention with mesmerizing iridescent metallic hues, precise spot embellishments, Ultra HD resolution and a robust suite of finishing options. Automated to deliver remarkable results and enable untapped revenue opportunities. Embrace your inner brilliance.

Xerox is honored to win the 2018 InterTech™ Technology Award and excited to present this innovative press to our customers.

Visit us in booth #1621 at PRINT 18.
Circle PersonalEffect Edition

The customer’s journey is at the heart of Circle PersonalEffect Edition. Released in 2017, this full-featured marketing automation tool for designing, deploying, automating, and measuring personalized omni-channel content and campaigns provides a single integrated view for the customer. It can automate every campaign touchpoint, both print and digital, allowing a project to generate revenues long after it has been set up while providing consumers with consistent messages and content across all media.

Circle provides print service providers (PSPs) with a solid foundation from which to transform their businesses by bridging the print and digital worlds and expanding into new and lucrative omni-channel efforts, rather than just print or email and landing sites alone. Circle does that by facilitating:

**Visualization and Collaboration:** At the heart of Circle is a diagram that articulates the flow of the customer experience, allowing PSPs, agencies, designers, and clients to visualize communication and collaborate based on the campaign diagram. This interactive diagram is used for all phases of a campaign, from idea to analytics, and its easily understandable interface and toolset allow users to share, drag, and drop with ease.

**Automation:** Circle’s dashboard allows easy scheduling of production in a campaign at given times, with recurrence patterns, and to filter populations according to their CRM data and individuals’ behaviors. Setting automation to respond to the customer’s interaction with the campaign gives PSPs greater flexibility to create all the touchpoints and response scenarios before campaign launch.

**Integration:** Circle, as part of XMPie’s Open XM technology, allows users to design and implement integrated campaign flows that include print, email, and personalized webpages, letting users reach consumers using their preferred media channels. Campaigns can be further extended using APIs that let campaigns integrate with bespoke solutions or other third-party software like Salesforce, Facebook, HubSpot, and others.

From beginning to end, Circle’s innovations make omni-channel marketing less labor intensive and smoother. Users can deploy Circle to coordinate and send a high volume of personalized and customized emails or a “triggered” email to an individual at high speeds via the XMPie Email Service (XES). The online email editor...

USER COMMENTS

“We have seen the innovation as Circle has developed over time and its automation capabilities have increased our ability to serve our clients’ needs for their campaign deployments.”

JAMIE TABONE, Prepress Manager, Compu-Mail
within Circle includes a responsive layout and building blocks that make it easy to create highly professional emails. Further integration with XMPie’s web-to-print solution, StoreFlow, allows omni-channel campaigns to be sold directly from the storefront interface, meaning end users can launch a multi-touchpoint, automated, and lasting campaign with an easy, self-service kiosk approach.

Once a campaign is set up, it can be replicated quickly with the “Project Instance” feature; users can leverage an investment made in a campaign or a workflow for future projects.

Working as a main control panel, Circle seamlessly connects to the PersonalEffect composition engine to access the databases and logic for generating personalized omni-channel campaigns that are perfectly synchronized across all channels and touchpoints. Campaign results are accessed directly from the Circle dashboard so users can understand trends and track how each recipient is interacting with different marketing initiatives and channels over time. It makes managing omni-channel communications an easy, well understood, structured, and professionally friendly task while lowering production costs and time constraints and delivering winning ROIs.

**USER COMMENTS**

“Circle helps ActionHQ convert customers because they develop confidence in the process at a very early stage and we are able to demonstrate campaign success and learnings in a very agile fashion.”

BRENDEN ROLSTON,
Managing Director, ActionHQ
2018 InterTech Candidates
KODAK NEXFINITY Digital Press

Eastman Kodak Company • Rochester, NY • www.kodak.com

In March 2018, Eastman Kodak made the KODAK NEXFINITY Digital Press commercially available. The NEXFINITY press is a 5-color electrophotographic sheetfed press for high-volume printers designed to give greater versatility to print on an even wider range of applications with high quality, speed, and consistent imaging. This new press is able to do that primarily thanks to the innovative new LED writing system and Kodak Dynamic Imaging Technology. The new LED writers work with 1200 × 1200 dpi resolution and 256 exposure levels per imaging spot. High quality images are assured by the Dynamic Imaging Technology, which automatically optimizes images using proprietary computational screening algorithms. These two innovative technologies work together inside the NEXFINITY press to boost quality and consistency over long production runs by tightening control of dot sharpness. With the NEXFINITY Digital Press, Eastman Kodak also introduces the innovative Fifth Imaging Unit, which enables the use of ten different specialty inks and introduces flexibility of the ink laydown order by changing the position of color stations. This allows operators to meet specific application requirements, like using opaque white before CMY or even printing CMY and two specialty inks simultaneously.

Heidelberg Duopress 106 Series

Heidelberg • Kennesaw, GA • www.heidelberg.com/us

Heidelberg’s Duopress 106 is an innovative series of machinery that creates high-end folding carton production in one pass and manages hot-foil stamping, die cutting, stripping, and blanking in one single production process. By providing all of these functions inline, the Duopress is able to complete an entire job—including makeready—in less than half the time of the conventional four-pass process. In addition to this impressive feature, the Duopress is the only sheetfed machine commercially available that features two platen stations. One station is exclusively for sheetfed die-cutting and the other is for hot-foil stamping, making it possible for those two processes to happen in one pass in one press. Each platen station can be individually configured, and both are synchronized. A stripping station and a blanking station can also be added. To minimize possible heat transfer, the machine has the most—and therefore the smallest—heat zones in the industry. To prevent vibration and ensure registration accuracy, a gripper positioning system was developed. The Heidelberg Duopress series also offers a variety of other machines with a range of capabilities, depending on the specific customer applications. Presses in the series are the Duopress 106 CC, the Duopress 106 FC, and Duopress 106 FCS, and the Duopress 106 FCSB.
HP Piazza
HP Inc., Graphics Solutions Business • hp.com/go/PiazzaforPublishing

The HP Piazza is a set of independent and interlocking cloud-based services created to reinvent publishing. This is achieved by allowing publishers to make book manufacturing and distribution more productive and cost-effective through a virtual warehouse. Made available in 2018, this warehouse allows publishers to manage, automate, distribute, print, and directly fulfill book orders while holding no physical inventory, bridging the gap between physical and digital book publishing. The data stored in the virtual warehouse repository is not only easy to manage, but also secure, searchable, and scalable. This innovative software was designed to connect seamlessly via HP PrintOS SiteFlow, enabling accurate, transparent SLA management, quick time to market, and reduced waste. The SLA management is a publisher-to-printer-specific setting that features real-time reporting of orders and delivery tracking on a featured publisher dashboard, which tracks SLA performance and volume by printer. By making it possible to print only the books that are already purchased, the HP Piazza reduces transportation time and cost as well as printing costs and has the propensity to eliminate warehouse costs altogether. Because of the cloud-based nature of the HP Piazza, it is possible to print the books that are purchased with any preferred print partners, anywhere.

HP Indigo 12000 HD Digital Press
HP Indigo • www.hp.com/go/indigo

Built on the proven B2-sized HP Indigo 1200 Digital Press, the HD version has new capabilities that make it ideal for pursuing a wider range of work. Made available in 2017, the HP Indigo 12000 HD Digital Press is able to double image resolution to 1625 DPI and deliver a sharper, smoother, finer print because of the High Definition Imaging System, a new writing head solution that uses an addition 12 laser beams. This opens new digital possibilities in high-end commercial and photo applications for print service providers (PSPs) and allows them to surpass offset quality, making those PSPs more competitive in the commercial print market. This new technology enables the digital printing of any commercial application on any substrate and allows PSPs to increase productivity by printing 29” sheets in color at up to 4600 sheets per hour and an equal amount when printing monochrome in duplex. A wider range of specialty inks, such as fluorescent, white, and light black, cyan, and magenta, enable production of higher-value pages. Additionally, sophisticated automation tools boost production efficiency and uptime. With the HP Indigo 12000 HD and its arsenal of image quality tools, a full transformation of photo printers from traditional silver halide processes to digital is possible.
**Komori KP-Connect**

Komori Corporation • Tokyo, Japan • www.komori.co.jp

In 2018, Komori released the subscription-based, press reporting, and analysis solution called KP-Connect. Modeled on Industry 4.0 architecture, the site-license-based product was created to enable users of Komori offset and digital presses to view near-real-time press operating data via a secured web browser. The solution is available to interface with all Komori presses installed with KHS-AI version 5 or greater, though an optional interface is available to add basic job data collection from non-Komori presses. KP-Connect provides industry standard Overall Equipment Effectiveness (OEE) reporting data as well as customizable reports to identify press operation efficiency issues and compare job performance by looking at factors such as multiple operators, teams, presses, paper types, and paper thickness. All activity and machine production that took place within a job is provided in detail in a convenient timeline format, which provides access to information such as printing speed, makeready time, production time, stopped time, machine error time, and information regarding color measurement. By providing print facility managers with more than simple charts and reports, the KP-Connect was developed to evaluate the performance of facilities for improvement. Analysis provided by KP-Connect is linked directly to the jobs that most negatively influenced the chart’s measured metrics to allow users the ability to quickly identify not only what may have caused the problem, but also which types of jobs are the least productive.

**IQ-501 Quality Optimizer**

Konica Minolta • Tokyo, Japan • www.konicaminolta.com/

With the introduction of the IQ-501 Quality Optimizer in 2017, Konica Minolta addressed two issues that propagated the idea that toner-based digital printing was inferior to conventional printing methods. The two issues addressed by this inline module are the lack of consistency of color control and an absence of paper-handling technology like grippers and side guides. These two issues counteract the advantages of digital printing. The IQ-501 Quality Optimizer eliminates those concerns by deploying two CCD scanners and an FD-9 spectrophotometer to instantly detect anomalies common to high-speed digital presses, such as color value, density, grey balance, and positional shifts. This highly automated technology then sends this data to the print controller and the feed system to trigger corrective action while the press is running at speeds up to 100 A4 pages per minute. The IQ-501 system—compatible with AccurioPress models C6100, C6085, C3080, C3070, C2070, and 6136—also eliminates the need for traditional color profiling by scanning a control strip and register marks on each printed page. All adjustments are achieved by using a simple, step-by-step user interface, which can be monitored by operators who have no color management experience.
LithoFlash Inline

With the LithoFlash Inline, Lithec promises new technology for existing presses, making it more cost effective for printers to increase plant productivity and compete with other print providers without having to purchase new equipment. Made available in 2014, the inline measurement and closed-loop control system innovates existing presses by reading and adjusting color without operator intervention. Created by Lithec GmbH and developed to be retrofitted into a wide range of used and new web and sheetfed presses, the LithoFlash Inline can be installed on web and sheetfed platforms that vary from 14” to 83” wide. With this extremely fast closed-loop process, users experience an average savings of 150–250 sheets in paper waste and 20% in setup time per job. In addition to being more cost effective than buying new equipment, the system uses low-cost, replaceable parts and is virtually maintenance free because of the long-life LED measuring lights that it uses. The LithoFlash Inline is compact, has no moving parts, and is completely encased in a dust-free enclosure that easily fits after the last printing unit or after the coater. It not only scans every sheet without any operator intervention to read densities, dot gain, and grey balance, but it also looks at the data from previous jobs compared to the data from the current job to dynamically adjust the ink keys and sweep to get the right densities in the fastest possible way.

Clickable Paper

First introduced in 2014, Ricoh Clickable Paper connects print and digital with cloud-based intelligent image recognition software to create an augmented reality, interactive print solution by using hotspots that link readers to one or multiple sources, taking them from two-dimensional printed content to online, multi-channel content. Printed marketing materials used in promotional campaigns now have the ability to immediately take the targeted audience to a webpage or webpages that both better engage and better inform in ways that a simple postcard or flyer could not before. Not only is the consumer more engaged, but companies are able to gather real-time analytics to see which aspects of the campaign are working and which aspects are not, making it possible to make informed decisions to quickly update and improve the effectiveness of the platform. All of this is possible without editing, reformatting, and reprinting the original printed page. Ricoh Clickable Paper provides a simple, low-risk growth strategy that builds on printing expertise to give print service providers the opportunity to deliver more meaningful content to their clients. Clickable Paper’s capabilities recently expanded to include gamification options, allowing users to implement several types of games that could keep consumers engaged in a campaign and with a brand for multiple days.
**RICOH Pro C9200 and C9210 Graphic Arts Editions**

Ricoh USA, Inc • Tokyo, Japan • www.ricoh-usa.com

Introduced in June 2018, the RICOH Pro C9200 and C9210 Graphic Arts Edition presses are part of a new series designed for the most demanding production environments to deliver high-quality, predictable results that maximize profitability, improve usability, and enable business growth. These new devices allow commercial printers to enhance revenue, reduce operational costs, and create opportunities for new applications with support for a wider range of substrates, increased image quality, and outstanding registration. The presses support paper weights of up to 470gsm and have the capability to run lengths of 49” simplex and 40” auto-duplex, the longest paper lengths in the market today. The series also supports a laser resolution of 2400 × 4800 dpi with a large color gamut without sacrificing speed or versatility. Additionally, the RICOH Pro C9200 series is able to produce consistent, professional output because of the inline sensors that automatically aid improved front-to-back registration and color calibration without advanced operator skills. Because of its uptime and reliability, this technology provides printers with an affordable, predictable way to maximize revenue. The format size of these sheetfed devices make it possible for customers to expand into new markets like book jackets, six-page brochures, and other unique applications. New job- and workflow-management options are possible because of the larger 17” Smart Operation Panel, which brings the ability to remotely monitor and manage print jobs directly to the device on a single screen. Both the RICOH Pro C9200 and C9201 are ENERGY STAR certified and carry an EPEAT Silver rating.

**Ricoh Invisible Red Toner**

Ricoh USA, Inc • Tokyo, Japan • www.ricoh-usa.com

In 2018, Ricoh released their highly technical security innovation, Invisible Red Toner, for the RICOH 5th Color Station. This toner creates an added level of privacy to printed information by being nearly invisible under regular circumstances; however, it is visible under ultraviolet light as a clear, distinguishable red. This toner makes adding security measures onto short-run and on-demand work much simpler and more effective. Imagine having an extra level of security on high-priority items such as concert tickets or VIP passes. The Invisible Red Toner can be used in a variety of applications, such as the RICOH Pro C7100X series, which made five-color print more affordable. Ricoh’s 5th Color Station is reliable and flexible; it helps to provide precise sheet-to-sheet and front-to-back registration based on a 12 × 18” sheet and a 700K duty cycle. By using the C7100x series in conjunction with the Ricoh Invisible Red Toner, users can quickly and efficiently create unique products with invisible features—such as security marks—for any type of run.
Xerox iGen5 Press White Dry Ink

Xerox • Webster, NY • www.xerox.com

Made available in 2017, the Xerox iGen5 Press White Dry Ink is a digital print enhancement tool that enables print providers to have more application flexibility by delivering more high-quality, high value digital jobs. With the iGen5 Press White Dry Ink, designers are also allowed the creative freedom to design applications for colored substrates where white is used by itself (next to CMYK or as an underlay). The White Dry Ink sets a new industry benchmark by doubling the brightness and opacity of competitive inks when printed on colored and transparent substrates. Because the White Dry Ink can produce the desired effect in one or two passes as compared to four or more, this easy-to-use new technology benefits customers by fostering more productive and less expensive operations. Additionally, the iGen5 comes equipped with a multi-pass feature that enables two layers of white to be printed automatically over or under CMYK, providing sufficient coverage. The iGen5 was initially equipped to print multiple layers to accommodate the Clear Dry Ink, but in order to print multiple layers of a single toner, a new fuser oil was developed and software adjustments were made. The iGen5 Press White Dry Ink was developed to address the needs of customers who want to expand their digital press jobs to new applications in marketing such as retail signage, direct mail campaigns, folding cartons and packaging, and greeting cards.
The InterTech star, recognized as a symbol of technological innovation and excellence, is presented to the recipient companies before an audience of industry leaders during the Premier Print Awards Reception & Ceremony, Sunday, September 30, 2018 held in conjunction with Print18 in Chicago, Illinois.

Tickets to this event are still available. If you would like to join us for a fun-filled evening celebrating the print industry's best and brightest, please email Mike Packard at mpackard@printing.org.

6:00 P.M. RECEPTION | GRAND BALLROOM FOYER
Cocktails, heavy hors d’oeuvres, & entertainment

8:00 P.M. CEREMONY | GRAND BALLROOM
Presentation of awards

Attire | Cocktail or Creative Black Tie
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