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THE MAGAZINE

TECHNOLOGY • SOLUTIONS • RESOURCES



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2017 FORECAST

featuring the InterTech™
Technology Awards

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18 Women in Print Alliance

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Editor: Joyce DeFrancesco
 Publisher: Jenn Strang

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Send manuscripts and news for potential publication to:
 Jenn Strang, 301 Brush Creek Rd, Warrendale, PA 15086
 Phone: 412-259-1810
 Fax: 412-741-6860
 Email: editing@printing.org
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Publisher's Message



Jenn Strang
 Senior Manager of Marketing
 Publisher, Printing
 Industries of America:
 The Magazine

I'm pleased to be addressing you as the new Publisher of *Printing Industries of America: The Magazine*. This is our first issue as a new team and we're excited to bring you this year's Summer Forecast, which includes the 2017 InterTech™ Technology Award supplement.

There are many exciting technologies on the horizon for the printing industry, and we've set out to give you a sneak peek at what trends might be appearing on your radar very soon. These include a great new mailing feature being rolled out by the United States Postal Service in which customers can now subscribe to receive a digital preview in their email inbox each day before the mail even reaches the mailbox. We also cover luminescent inks for use in marketing and safety and security printing, along with the future of fabric printing. In this issue we also profile the Women in Print Alliance, which is making strides in bringing more women to the print world and fostering mentorships for future growth.

If you are planning to attend PRINT 17, please stop by our booth #3802 to say hello and meet our team. Also, we are always striving to find fresh new content and make improvements to *The Magazine* so please send your ideas, feedback, and questions to magazine@printing.org.

CORRECTION:

In the July 2017 issue of *The Magazine*, NAPCO Inc. was incorrectly identified on page 1 as a commercial printer. They are a North Carolina-based custom packaging manufacturer. For more information about the company, please visit their website at www.napcousa.com. Our apologies for any confusion.

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President Trump's Effect on EPA & OSHA

Gary Jones, Assistant VP, EHS Affairs; **Kaitlin Rundle**, EHS Associate; **Matthew Crownover**, EHS Associate; Printing Industries of America

The election of Donald Trump as the 45th President of the United States quickly brought changes in Environmental Protection Agency (EPA) and Occupational Safety and Health Administration (OSHA) regulations. One of the central themes of his campaign was reducing government regulation as part of an effort to stimulate the economy.

President Trump and his administration wasted no time in reducing regulations. One of his first executive orders was that for every new regulation imposed, two existing regulations must be rescinded. He also issued an executive order focused on the controversial Obama administration rule expanding the definition of "Waters of the United States" or WOTUS. The Trump administration wants the current rule to be repealed and replaced with a less intrusive one, and the EPA has started the process.

Another executive order was directed at ways to roll back regulations on Obama-era policies pertaining to climate change, including emissions rules for power plants (the Clean Power Plan), limits on methane leaks, a moratorium on federal coal leasing, and the use of the social cost of carbon to guide government actions. He also announced that the United States will be withdrawing from the 2015 Paris Accord in order to renegotiate.

Fifteen other regulations also have been delayed to be reconsidered, modified, or eliminated. The most recent delay was a one-year extension of the deadlines for complying with the 2015 ozone National Ambient Air Quality Standards (NAAQS). This is significant as it was due to go into effect in late 2017 and it would trigger many new air pollution control regulations.

During the campaign, candidate Donald Trump did not vocalize his criticism of OSHA. However, one regulation caught up in lawsuits is the new Electronic Recordkeeping/Non-Discrimination rule. These new regulations required the electronic submission of OSHA logs, incident reports,



and annual summaries by July 1. This deadline has now been postponed and the future submission date will be December 1, 2017, unless further delayed. OSHA also withdrew its guidance allowing union representatives to accompany OSHA inspectors at non-union shops. While this is still allowed to occur, there is a much higher level of justification required.

Lastly, Congress used its authority to roll back another OSHA rule requiring companies to update their injury and illness records for five years. The rule aimed to extend the statute of limitations (from six months to five years) on how long the agency can issue a citation for failing to record an injury or illness. OSHA lost this battle in court in 2012. Yet, OSHA issued its rule, which prompted Congress to take action. Even though this rule was rescinded, companies with 10 or more employees are still required to keep and maintain five years of injury and illness data.

As promised during the election campaign, Trump has focused on and will continue to reduce regulatory burden. There will be contentious fights on multiple fronts including legal battles by those who do not wish to see the regulations changed, but the theme of reduced regulation will continue throughout the current administration.

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SkillsUSA Showcases Trade's Next Generation

Jim Workman, Vice President, Center for Technology and Research, Printing Industries of America

TECHNOLOGY



The 2017 edition of the SkillsUSA Championships was held June 20–23 in Louisville, Kentucky. More than 6,000 students joined in the excitement of hands-on competition in 100 different trade, technical, and leadership fields, including graphic communications. Only students who won their state SkillsUSA contest were eligible to compete.

SkillsUSA is a nonprofit association representing almost 400,000 students and advisors in trade, industrial, technical, and health occupational education. It sponsors the SkillsUSA Championships annually to recognize the achievements of career and technical education students and to encourage them to strive for excellence and pride in their chosen occupation.

The graphic communications competition consisted of exercises in digital workflow, electronic prepress, offset and digital press operations, finishing, and production planning, along with verbal and written assessments. Specifically, students had to assemble and preflight files, print work on sheetfed offset and digital presses, cut and fold paper to specifications, participate in an oral interview, and take an online test to assess their overall graphic communications knowledge.

Printing Industries of America assisted with the competition and sponsored a breakfast for the competitors and their advisors at Churchill Downs. The organization also took the group on a tour of Vivid Impact, one of Louisville's premier printing companies, so students could learn more about industry careers and operations.

To get the full sense of the contest, envision a large space in the middle of the mammoth Kentucky Exposition Center with four digital presses, three sheetfed offset presses, two



(top left and bottom) A student competes in the offset press portion of the contest as a judge observes.

(top right) A competitor is interviewed by two judges from LSC Communications



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folders, 10 computer workstations, and interview and testing areas. Now, add in two dozen competitors, more than a dozen judges and competition committee members, and a gallery of anxious parents and instructors.

The 2017 high school medalists in graphic communications were:

- Gold—**Haylee Cooper**, Diman Regional Vocational Technical High School (Fall River, Massachusetts)
- Silver—**Cody Brown**, Johnson High School (Gainesville, Georgia)
- Bronze—**Lexi Hengeveld**, Carroll County Career & Tech Center (Westminster, Maryland)

The 2017 college/postsecondary medalists were:

- Gold—**Brittany Whitestone**, Carroll County Career & Tech Center (Westminster, Maryland)
- Silver—**Cheyenne Kasmierski**, Thaddeus Stevens College of Technology (Lancaster, Pennsylvania)
- Bronze—**Daniel Long**, Riverside Community College (Riverside, California)

In addition to the thrill of ascending the medal stand during the closing ceremonies before 10,000 cheering SkillsUSA

attendees, advisors, and parents, the students received an array of prizes, including computers and other electronics.

The competition committee was chaired by Dan Wheeler of DK Wheeler Training and Consulting services. Funding, staff, and equipment were provided by Atlas Die, Baumfolder, EFI, Graphic Arts Education and Research Foundation, Heidelberg USA, Print Craft Supply, Printing Industries of America, LSC Communications, Quad/Graphics, and Xerox.

The SkillsUSA competition celebrates the type of talented individuals that our industry strives to attract and it deserves our industry's ongoing support. The 2018 Championships will return to the Kentucky Exposition Center in Louisville on June 19–22, 2018.

LEARN MORE

If interested in contributing to or attending the 2018 Championships, contact Jim Workman (jworkman@printing.org or 412-259-1710).

Learn more about SkillsUSA at skillsusa.org and about the graphic communications competition at futureprintersofamerica.com.

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Business Standards Protect Your Company

Dillon Mooney, Technical Consultant, Printing Industries of America



I am often asked about standards for various printing industry processes, including those to define quality, equipment, and personal productivity. The graphic arts industry is large and diverse, with each job being custom manufactured, making setting specific standards unrealistic.

Aside from quality not meeting expectations, the three most common sources of misunderstandings or disputes that should be addressed in terms and conditions documents are:

Ownership of materials used to produce a job: Many customers assume the cost to print a job covers all materials used and that they have paid for and own these assets. Printers consider materials they produce to print the job their property and would not want to furnish them to a customer. The customer could provide the materials to a competitor who would not have to create them and could then underbid the printer. The current Best Business Practices document includes language addressing this issue under “Insurance, Risk of Loss.” Files, artwork, and other materials supplied by the customer are the customer’s property. If the customer is charged to correct their digital files, does the customer own the corrected files? If the printer creates artwork and charges the customer, does the

A common request I receive from printers who are having disputes with customers over business practices or contract terms. Agreements with customers are often verbal, and printers are seeking current trade customs to inform the customer of industry standard practices.

The trade customs document that guided industry behavior for decades was replaced in 2001 by the Best Business Practice Guidelines for Terms and Condition of Sale, written by a committee representing PIA, GATF, NAPL, and NPES (The term “trade customs” has fallen out of favor due to legal and antitrust implications). The Best Business Practices document is meant as a guide to create custom best business practices and terms for conditions of sale for your company and avoid misunderstandings with customers. Some parts of the document may need adjustment for specific customers based on needs and expectations.

Printers should be aware that these documents are not recognized by an official standards organization and thus are not “standards.” These documents are typically not binding in court unless both parties are aware of the terms and conditions before the quote or contract to print the job is accepted.



customer own the artwork? Does the customer own the page layout and imposition files the printer created? This should be defined clearly and may need to be modified for different customers. Some printers include this as a separate section in their terms and conditions of sale.

Proofing: The customer needs to understand company policy and their responsibility for verifying the accuracy of proofs. Proofs signed with an "OK" mean "print as is," and the printer is not responsible for mistakes. If the customer does not require proofs or does not want to pay for proofs, they must know that the printer is not responsible for work printed with mistakes as they were supplied. The printer should have an internal QC process to ensure work is printed as was supplied by the customer.

Overruns: The current Best Business Practices document says "Overruns or underruns will not exceed 10 percent of the quantity ordered, unless specified otherwise in the agreement. The supplier will invoice for the actual quantity delivered within this tolerance. If the customer requires a guaranteed quantity, the percentage of tolerance must be stated at the time of estimate." Do your customers require specific quantities? Do you charge customers for over/underruns? As many customers are unaware of this policy, it should be clearly defined and may need to be adjusted for different customers.

LEARN MORE

Printers need to have a document specifying best business practices and terms and conditions of sale to protect them in disputes with customers, as courts are unfamiliar with common practices in the printing industry. An attorney should review the document, and the final version should be provided to the customer before any job is accepted and printed.

Our Best Business Practices for Terms and Conditions of Sale template is available in PDF form here: printing.org/resources/free-member-resources (PIA membership required to access).

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Workforce Development

Recruiting and Training a Skilled Workforce

Adriane Harrison, Director, Human Relations, Printing Industries of America



Printers are facing a predicament—finding skilled workers who can be recruited and trained to run presses, binders, and other printing machinery. As skilled labor is becoming more difficult to find, printers are also facing the “Silver Tsunami” of retiring print workers, adding to the severity of the problem.

Printers are not the only ones hurting for skilled labor, so they must compete for new workers against other manufacturers, the health care industry, construction fields, and the trades. Researchers estimate that 30 percent of all job openings in the next decade will require less than four years of postsecondary education. Due to the increasing demand for skilled labor, the time to recruit and retain print workers is now.

While these challenges are daunting, solutions are underway. First, with sweeping bipartisan support, the Perkins Career and Technical Education (CTE) bill has been reauthorized by the House of Representatives and is moving through the rest of the authorization process. The Perkins Act provides federal funding to states for high school and community college career and technical education, such as teaching skills needed to operate modern printing equipment. This newest version of the Perkins Act increases CTE funding by 9 percent over six years.

In addition, President Trump has stated his support for CTE programs and signed an executive order expanding apprenticeship programs and vocational training. The executive order calls on the Secretaries of Labor, Education, and Commerce to work together to propose regulations that promote development of apprenticeship programs by businesses, trade groups, nonprofit corporations, unions, and



Benjamin Franklin as an apprentice
(Published in the U.S. before 1923 and public domain in the U.S.)

joint labor-management organizations. Printing Industries of America (PIA) is reaching out to the Department of Labor to be a voice for the print industry in the development of these programs.

The anticipated financial support for CTE makes working in manufacturing or other skilled labor an attractive career option. The College Board reports that a moderate college budget for in-state tuition to get a four-year degree will cost around \$100,000. Post-collegiate student loan debt payments average \$351 monthly. After adding in the average cost of renting an apartment (approximately \$700 per month); owning a car (\$561 per month); and the essentials, such as food, utilities, cell phones, and recreation, many graduates cannot comfortably support themselves.

Alternately, the average cost of a trade school education totals just \$33,000. Not only is there a dramatic immediate cost savings, CTE students have the added benefit of securing an apprenticeship that will pay a respectable wage while they are learning. The high demand for skilled labor promises students will be able to use their degree, which cannot always be said about many students with a bachelor's degree.

PIA has begun reaching out to lawmakers about CTE funding and will continue reaching out to policy makers and helping devise methods to diminish the impact of the Silver Tsunami to our industry.



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Tradition, Fads, Trends & Disruptive Innovations: There's room for us all!

SPOTLIGHT



DANIEL DEJAN,
NORTH AMERICAN ETC
PRINT & CREATIVE MANAGER,
SAPPI NORTH AMERICA

As the (self-proclaimed) Futurist and Trend Spotter for Sappi North America, I am constantly seeking out new innovations, inventions, discoveries, materials, or processes that will make an impact on the graphic arts industry.

Recently, Frank Romano forecasted that, within a handful of years, half of all commercial printing will be digital. Given the exponential strides in digital printing equipment, including increased speed and sheet sizes, more options for color, specialty inks, special effects, finishing techniques, and bindery solutions—plus the increasingly smaller run sizes emphasizing personalization and/or mass customization—his prediction is not surprising. And, if we take into account the disruptive impact Landa's NANOGRAPHY® technology will surely have in the market as well as its expected impact on equipment, technology, and creative

choices, it's a safe bet that we are on the precipice of a new digital revolution in printing.

So, if half of printing purchased will be digital, can we assume the remainder will represent web offset and high-quality sheet-fed printing for books, magazines, catalogs, advertising, direct mail, and long run collateral? If so, I believe there will remain a myriad of opportunities for traditional printers to keep busy and profitable. And, those with presses not fully engaged can consider modifications that will allow them take advantage of new technological innovations and explore completely new revenue opportunities.

Some of these innovations are still in their preliminary/beta stages while others are already being implemented throughout the world.

Here are just a few examples of the new technologies that I believe will either have a long trend life or may well be disruptive innovations that will create opportunities for printers and open up a range of new product categories for the market.

Image Recognition and Page Mobilization

Certainly, these have been two of the most significant innovations in the industry. With these technologies, we can direct a print reader to continued online engagement for merchandising, marketing, or education using a printed trigger and a smart device. Admittedly, print has physical limitations regarding page count and the amount of content that can fit legibly onto a page—most often dictated by budgetary constraints. With image recognition and page mobilization, we are now able to transport the reader from printed page seamlessly to unlimited online content. The length, depth, and comprehensiveness of the content is, essentially, unlimited.

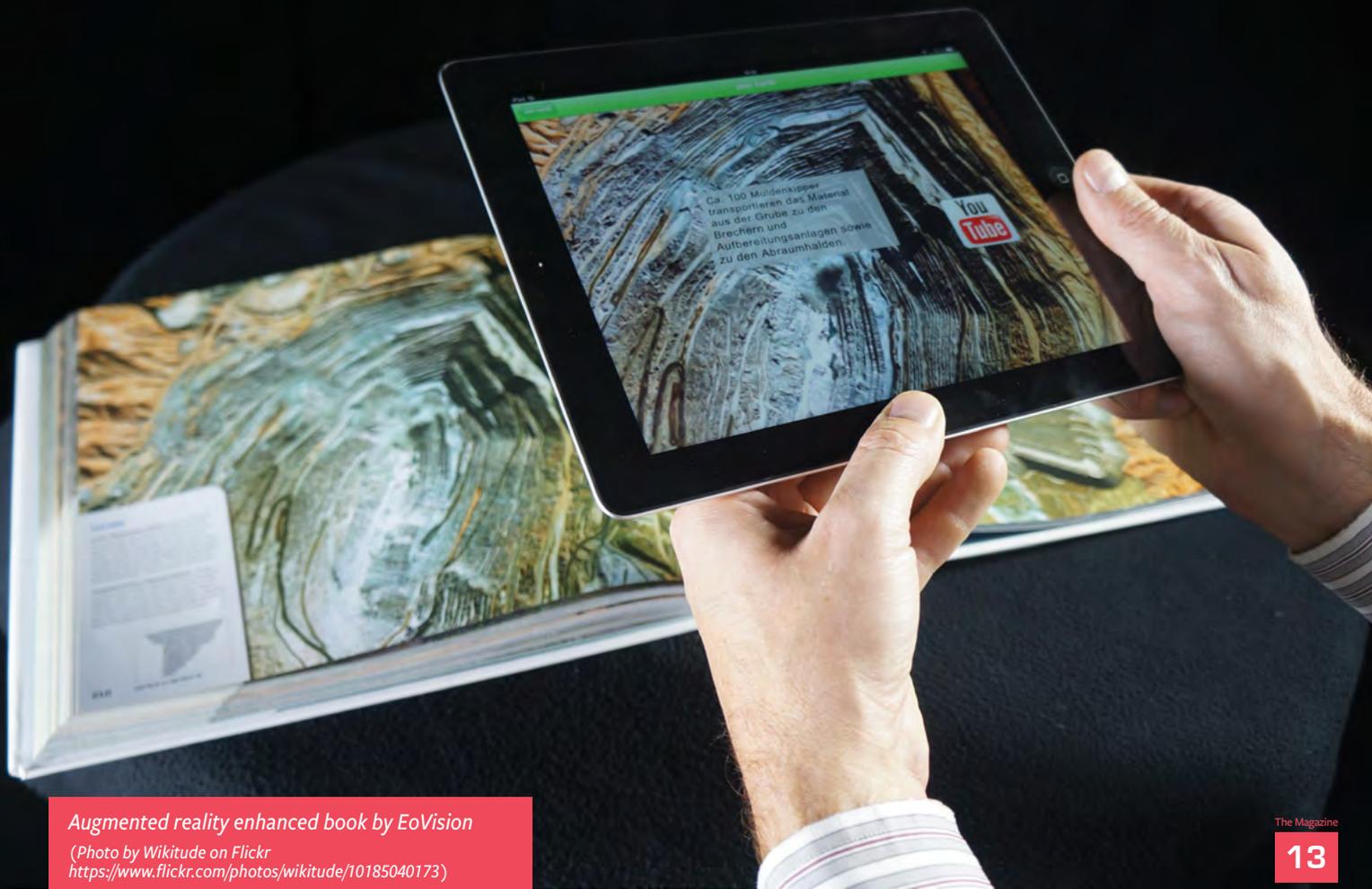
“The illiterate of the 21st century will not be those who cannot read and write, rather it will be those who cannot learn, unlearn and relearn.”
—Alvin Toffler

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Augmented reality enhanced book by EoVision

(Photo by Wikitude on Flickr
<https://www.flickr.com/photos/wikitude/10185040173>)

And, a reader's ongoing engagement with that content is only based on attention span and whether or not the content is relevant and timely to the reader's interest. Augmented Reality (AR), Near Field Communications (NFC), and the growing areas of Virtual Reality (VR) and Mixed Reality (a flexible hybrid of the best aspects of AR & VR combined) are technologies that printers can—and should—be offering to their customers, especially with available resources such as Apple's ARKit™ software and Layar's very pragmatic AR software.

New Inks and Electronics

With the (relatively) recent introduction of these disruptive technologies, whole new products and technological innovations are available to printers. The principal innovation behind these technologies was the breakthrough technique of printing fine circuitry onto a wide variety of substrates on an offset press. The invention of this amazing process, in combination with the extraordinary advances made in ink technology, has led to the introduction of a number of truly disruptive innovations: electro-conductive inks (inks able to carry an electric

charge), electro-luminescent inks (inks that can generate light), and what I consider to be the most amazing engineering achievement, the ability to print circuitry that—when used with electro-conductive inks, an outside power source, and Bluetooth technology—can connect a printed piece with a smart device to reproduce sound.

Through several decades of training experience, I've learned that video is a powerful medium. To that end, each innovation I've discussed can also be viewed on a video sharing platform, like YouTube, further amplifying your reach. You can see presentations from inventors and content creators (usually scientists or engineers) excited to share their work or from corporations eager to promote a new product or service. Here are some of my favorites that I hope will provide ideas for innovation and experimentation in your own work:

Electro-conductive ink technology:

- Circuit Scribe—Draw circuits with a pen with electro-conductive inks (<https://youtu.be/WMtx8UYxRFk>)
- Conductive Inks and Circuitry (<http://www.henkel-adhesives.com/conductive-inks-coatings-27433.htm>)

Electro-luminescent inks

- Bacardi's Bombay Sapphire gin electro-luminescent packaging (<https://youtu.be/nTppXvsJkbc>)
- Electro-luminescence in signage—Four-minute video filled with the new electro-luminescent material replacing neon in Asia. Warning: the materials used are not approved for use in United States (<https://youtu.be/Nq-Ru8jIDGI>)
- The Creators Project—Vega Zaishi Wang's Electroluminescent Fashion Collection Alpha Lyrae (<https://youtu.be/BmBelsJRp8o>)

Printed electro-conductive inks connecting smart devices through Bluetooth technology:

- McDonalds' McTrax placemat (<https://youtu.be/X6zPbogDPgU>)
- Novalia—The company founded by Dr. Kate Stone, the engineer who pioneered this technology (https://www.ted.com/talkskate_stone_dj_decks_made_of_paper)

While I love traditional printing—and firmly believe that it will play a constant and an important part in our commercial culture—I'm thrilled that these new innovations are available to printers. All of these inventions and discoveries are producing new products once only dreamed of in science fiction.

And, like the best products we see in science fiction stories, not only are these innovations exciting and amazing, but they can provide new ways for us to help our clients communicate with their customers, colleagues, and communities in engaging, thoughtful, and meaningful ways.



Photo credit: Karl Krauer KG



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Printer Benchmark

What Criteria to Use to Purchase New Devices or Monitor Current Devices?

David Hunter, ChromaChecker Corporation

We have been involved in multiple situations in which individuals lost their jobs, or a lot of credibility, because they bought color output devices that did not perform to the expectations of customers or management. We have developed a straightforward way to benchmark any output device and understand what its normal variation and normal accuracy is in order to implement necessary processes to bring the device to desired expectation of color reproduction.

ChromaChecker is the first Color Conformance Platform which can quantify owner and customer expectations and assess if output device can meet their expectations. It also assesses the precision and accuracy of any output device and fixes the accuracy by iterating new G7 tone curves to bring a device back into compliance with the desired target.

Unlike any other system on the market today, ChromaChecker provides a manufacturing framework which can assess a device's performance per sheet, per job, and over time. ChromaChecker can quantify which device/track is the closest to the desired reference condition by establishing a targeted E-Factor. E-Factor is based on CRF at the 95th percentile delta E (00). It provides an excellent indication of how close the colors on the pages match to the reference, and constantly monitors devices, ensuring stability months after the last test.

Digital Press and Large/Grand Format Devices and Proofs

ChromaChecker has developed four PDF files that are designed to benchmark proofers, digital presses, and large format devices and provide measurement data that, when uploaded to ChromaChecker Cloud, will provide eight different benchmarks for an output device (To

obtain the test, email david@chromachecker.com).

The eight benchmarks cover:

1. Within-page uniformity (PDF1/Precision)
2. Primary (CMYK) colors matching reference printing condition numbers (PDF1/Precision)
3. Repeatability through any length print run, including page uniformity within print run (PDF2/Precision)
4. Reproducibility between multiple days (PDF1/Precision)
5. Shared visual appearance between multiple devices (PDF3/Accuracy)
6. Gamut volume numeric metric along with percentage of PMS colors within the gamut (PDF3/Accuracy)
7. Accuracy of the devices ability to match GRACoL (PDF3/Accuracy)
8. Addressability, determining the marking engine's resolution and contract capabilities (PDF1/Precision)

Conventional Press with Export Capable Automated Measurement Devices (Intellitrax/SpectroDrive/Heidelberg Image Control)

Unlike other color software, ChromaChecker is compatible with virtually any software a company is already using to measure color (as long as it can export data). ChromaChecker is eliminating the need for conducting dedicated press runs to iterate G7 conformance. ChromaChecker has engineered G7 Calibrated Control Bars, which have solids in every ink zone, along with tints and G7 gray finder patches spread throughout the remaining patches. These finder patches allow ChromaChecker to assess G7 conformance within-page uniformity, ensure solids are



matching industry references and that job repeatability and reproducibility are within desired expectations, and they can also be used to accurately iterate plate curves to bring the press into G7 conformance. This enables dedicated press runs to become a thing of the past. ChromaChecker has a number of predefined G7 Calibrated Control Bars for different press ink key widths and key zones. ChromaChecker subscribers have full access to the ChromaChecker library.

Conventional Press without Export Capable Automated Measurement Devices that Can Export Data

ChromaChecker has engineered G7 Calibrated Control Strips that can be measured with portable measurement instruments (like scanning ilPro and Exacts) that allow you to position small strips within the press sheet. This data can also be used to accurately iterate your plate curves to bring your press into G7 conformance.

Benefits to Benchmarking Devices—Productivity and Profitability gains

Many companies do not understand how their output devices manufacture color related to precision and accuracy, and yet, it is imperative to understand these two attributes in order to troubleshoot and fix your color process if it is not meeting expectations.

- ChromaChecker will significantly reduce waste because operators will know if current prints are

sellable, and if not, stop printing immediately eliminating unnecessary waste.

- Most companies print any way, any day. They have very little precision or accuracy and their customers don't complain if their expectations are not met; they just go elsewhere.
- Some printers have better control of their output devices and have scanning spectrophotometers to assess their process, which provides consistency but not accuracy.
- Some printers don't have scanners but do update their profiles, or G7 tone curves, regularly, giving them decent accuracy but not great consistency.
- The best printers have both consistency and accuracy and do not print jobs over again. They are correct the first time and they know it, and they can prove it to their customers. These are the printers that make up less than 15% of the industry and make more than 10% gross margin on sales.

The person who submits the print with the lowest E-Factor compared to GRACoL will win a free iPad mini.

Contest ends November 30, 2017.

LEARN MORE

Article references Bob Chung TAGA Paper 2001, Bob Chung, David Hunter, Pierre Urbain, Elena Federoska 2017. See ChromaChecker TAGA 2017 papers on Color Matching and Shared Color Appearance for more information.



Women in Print Alliance Opens Long-Overdue Conversation

SPOTLIGHT



KATE ACHELPOHL
SR MANAGER OF PUBLIC
RELATIONS, SGIA

The printing industry is leaving talent on the table: Roughly half the global workforce is female, but women make up just 26 percent of the industry, according to research conducted at the 2016 SGIA Expo.

“As a result, we’re missing out on opportunities to tap into a diverse bank of experience and talent,”

said Marci Kinter, vice president, government and business information, Specialty Graphic Imaging Association (SGIA). Kinter is a member of the Women in Print Alliance, which is focused on attracting, retaining, and advancing women in the printing workforce.

First on the Women in Print agenda: an industry-wide survey to compile a snapshot of women’s experiences, expectations, and priorities.

“Opening a dialogue is the first step to understanding the roles women play in today’s printing industry,” said Kinter. Women in Print will share survey results at its breakfast on Wednesday, October 11, in conjunction with the 2017 SGIA Expo. Results as of July 4 showed some interesting trends emerging.

What Brings Women to the Industry?

So far survey results show that 67.5 percent of respondents “use printing/imaging technologies to produce a product or contribute to a finished product” and 22.4 percent “provide equipment or consumables to the printing/imaging industry,” a ratio of about 3:1. The top three areas represented by our respondents are sales and marketing (23.3 percent); senior management and leadership (20.5 percent); and art and design (17.8 percent); and the most popular job functions are senior management (24.7 percent), business management (19.2 percent), and art/design personnel (16 percent).

As is often the case, more than a third (37.9 percent) of women in the industry came into it by happenstance. It’s worth noting that for each woman who fell into the industry, another has started her own business (19.2 percent) or joined intentionally, spurred by her passion for graphics (16.9 percent).

Women are staying with printing, no matter how they got there. To date, 36.8 percent of respondents report more than 20 years in printing.

“Our field is creative, dynamic, and exciting, and there’s a need for skills in all areas, from graphic design to administration and sales. Printing is a great place to grow,” said SGIA’s Maggie Stevens, vice president of marketing & communications. When asked to describe what makes printing an attractive career field, the most common responses included “creative/creativity, changing, and challenging.”



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“It’s a perfect industry for women, whether in production as a printer or an artist. All jobs can be handled by either a man or a woman. Most industries aren’t like that,” said one respondent.

The Flip Side

All jobs in print can be handled by a man or a woman, but that doesn’t mean that men and women are being considered for all jobs. Many respondents voiced a perception of printing as a boys’ club.

“[The industry is] very male-centric. The majority are not very accepting of women in leadership or technical roles,” said a respondent.

Another expanded on that theme. “The treatment of women in a ‘men’s world’ within our industry can be disheartening at times,” she said. “The inability to move up, forward, and advance led me to consider leaving, before I started my company and took charge of my options and future within the industry that I love.”

Still another respondent noted that change is afoot. “The industry has traditionally been run by men. The participation of the woman is already greater today. This is already an incentive for women to stay and grow,” she said.

Learn More About the Women in Print Alliance

The Women in Print Alliance will share survey results with the public during its breakfast (October 11) held in conjunction with the 2017 SGIA Expo. The breakfast will also feature keynote speaker Fawn Germer, author of *Work-Life Reset*, which discusses how to reboot work-life balance and live a more meaningful, productive life without regrets.

Germer will facilitate Big Picture magazine’s Women in Print Winners panel discussion (October 11, 2:30 p.m.). The 2017 honorees will discuss the role of women in today’s print industry and the unique traits and experiences that make this group exemplary.

Learn more about the Women in Print Alliance at SGIA.org/industry/women-print-alliance.



USPS Integrating Digital Mail with Physical Mail

Gary Reblin, Vice President, Production Innovation, U.S. Postal Service

TECHNOLOGY



The United States Postal Service® (USPS) recognizes consumers' increasing desire to interact and communicate digitally with everything, including their mail.

The Postal Service is doing something new—and digital—with mail.

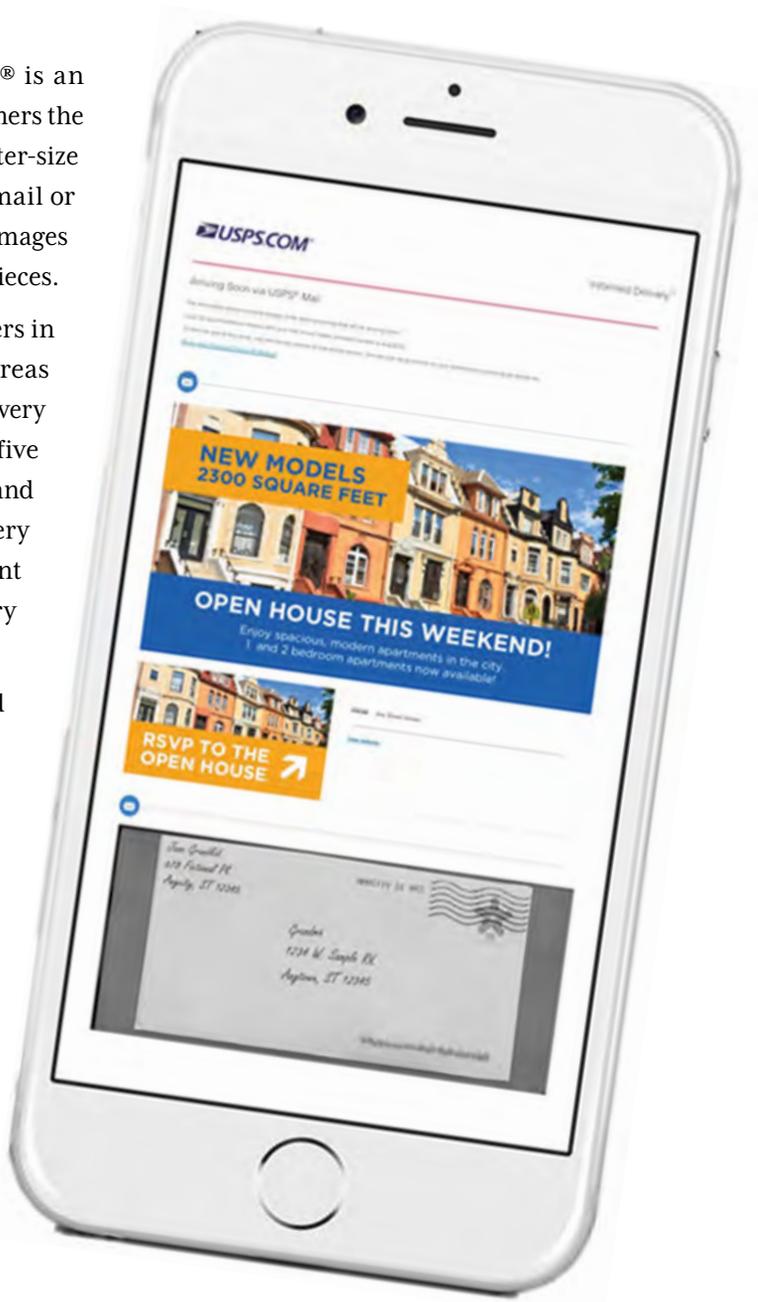
Informed Delivery® is an innovative feature that gives residential consumers the ability to digitally preview their household's letter-size mailpieces arriving soon. Users receive an email or dashboard notification that includes grayscale images of the exterior, address side of incoming mailpieces.

Based on the success of an initial pilot with users in the New York Metro and Northern Virginia areas from 2014 to 2016, USPS expanded Informed Delivery to consumers nationwide in April 2017. Over five million users are already receiving the feature, and this number continues to grow! Informed Delivery has been well received by users, with 91 percent of surveyed respondents indicating they are very satisfied or satisfied with the feature.

Informed Delivery creates an unprecedented opportunity for mail owners, mail service providers (MSPs), and agencies to engage users through synchronized digital and physical touchpoints. Organizations who participate in an Informed Delivery campaign can replace the grayscale images of their scanned mailpiece with a color image and supplement the mailpiece with interactive, clickable content displayed in users' notifications. In

today's marketing landscape, Informed Delivery offers organizations a variety of benefits:

- **Engaged user base:** A 2017 survey of pilot users found that 85 percent of respondents use Informed Delivery to anticipate incoming mail. Informed Delivery is an optional feature that consumers must sign up for, meaning users are motivated and want to interact with



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their mail, and 88 percent of survey respondents check their notifications every day or almost every day, with many citing that they use the feature to take action on mail sooner via the digital preview.

- **Multiple channels and impressions:** Direct mail traditionally only reaches the addressee via the physical mailpiece. Informed Delivery campaigns integrate physical mail and digital marketing campaigns, allowing organizations to reach their customers through the act of physically retrieving the mail and a digital touchpoint. Additionally, if there is more than one user in a household, an Informed Delivery campaign can help increase visibility not only to the target audience, but also to other Informed Delivery users within that household.
- **Enhanced call to action:** Interactive content, such as colorful images and URLs, creates an engaging experience and reinforces the customer call to action, creates brand loyalty, and potentially generates more revenue.
- **Improved visibility into campaign performance:** Organizations can leverage the Postal Service's trusted brand; Informed Delivery has a 70 percent

email open rate, which is significantly higher than average industry open rates for digital marketing campaigns. USPS may also share information in the aggregate to the sender of a mailpiece through a post-campaign summary report, which provides general campaign results, or through a detailed report that provides information at the ZIP Code™ level for a more in-depth analysis of a campaign's performance.

USPS is enhancing the value of physical mail by seamlessly integrating it into a rich, digital experience. Informed Delivery creates a new marketing channel that complements both physical mail and digital messaging, thus maintaining the relevancy of mail and growing mail volume.

LEARN MORE

If you'd like to learn more about conducting an Informed Delivery campaign, please visit the Informed Delivery Business Mailer website at usps.com/informeddeliverycampaigns.



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The Wide World of Fabric Printing

Abridged from article by **Toni McQuilken**, originally published by PrintingNews.com

There are a myriad of types of jobs that can be produced by wide-format printing. Printers and designers have come up with highly creative uses of the technology, and innovation will only continue as inks, printheads, and substrates continue to improve. One category in particular is starting to gain some real steam—fabric printing—and one subset in particular is gaining momentum: garment printing.

Patrick Clark, founder of NextWave Media Solutions, is one printer in the United States who sees a major shift coming in how clothing is created. He is the first to run an EFI Reggiani press in North America and has big plans for what's next.

“The ability to do short run, on-demand apparel printing has great advantages,” said Clark. “Because of the technology, and because of the practicality, it's now become a reality in our marketplace. The ability to—at a decent price—produce a garment on demand, and not just custom pieces, but any garment, is incredible. We can efficiently produce pieces not just for micro production houses, but for any retailer, and this is the way Amazon and other big players will fulfill their production in the future. It's on demand so they don't have to carry billions of items, they can just produce whatever is required, in whatever size is needed.”

Companies in Europe are having some success with this model, with clothing house Zara a prime example. Clark notes that they have shortened design and production times, using wide-format digital technologies, to achieve tighter cycles than ever before. “It used to take six weeks to get the first design approved, and they would be selling up

to 14 months in advance,” he said. With new technologies, however, he notes that Zara is taking just six weeks from the design phase to purchase availability.

Things to Keep in Mind

As exciting as being able to custom-print clothing that is the exact color and size needed on demand is, there are still challenges to face. In particular, notes Tommy Martin, product manager, Textile & Apparel Business Development & Marketing, Mimaki USA, “Currently there is no universal textile ink that will print to all fabric types. Preprocessing, production, and post-processing is dependent on the type of fabric. Other printhead technologies are an untapped market for direct-to-fabric printing such as spot colors, color promoters, pretreatments, UV coatings, flame and heat protection, etc.”

Martin notes that for anyone considering adding fabric printing of any type, including garments, the key is to determine what you'll be printing on. In addition to knowing what inks and printheads are best for that specific type of fabric, he says, “Also, is the fabric stretchy in all directions or firm? Stretch fabrics require a transport handling system like a belt that stabilizes it during printing to minimize movement and stretching. Each process requires additional post-processing equipment to cure and finish printed fabrics.”

To get costs down to the point where, for example, a store could have their entire inventory custom produced on a daily or weekly basis, it will require automation. Automating sewing isn't quite there yet, Clark says, but there are some companies doing very interesting things in the space, so a solution that begins to incorporate those elements is not as far off as some might think.

Color consistency is another key requirement. When two people buy the same shirt from the same designer, they

expect it to have the same colors and patterns. Creating a consistency in the manufacturing process is going to be a major element of successfully moving garment production into the digital print space.

Getting Started

For a wide-format printer looking to add new products, garment printing might not be as difficult to experiment with as might be thought. Clark notes that many shops already have several of the components they'll need in place, like automated cutting equipment, and many already have sewing and finishing capabilities, depending on the type of signage produced.

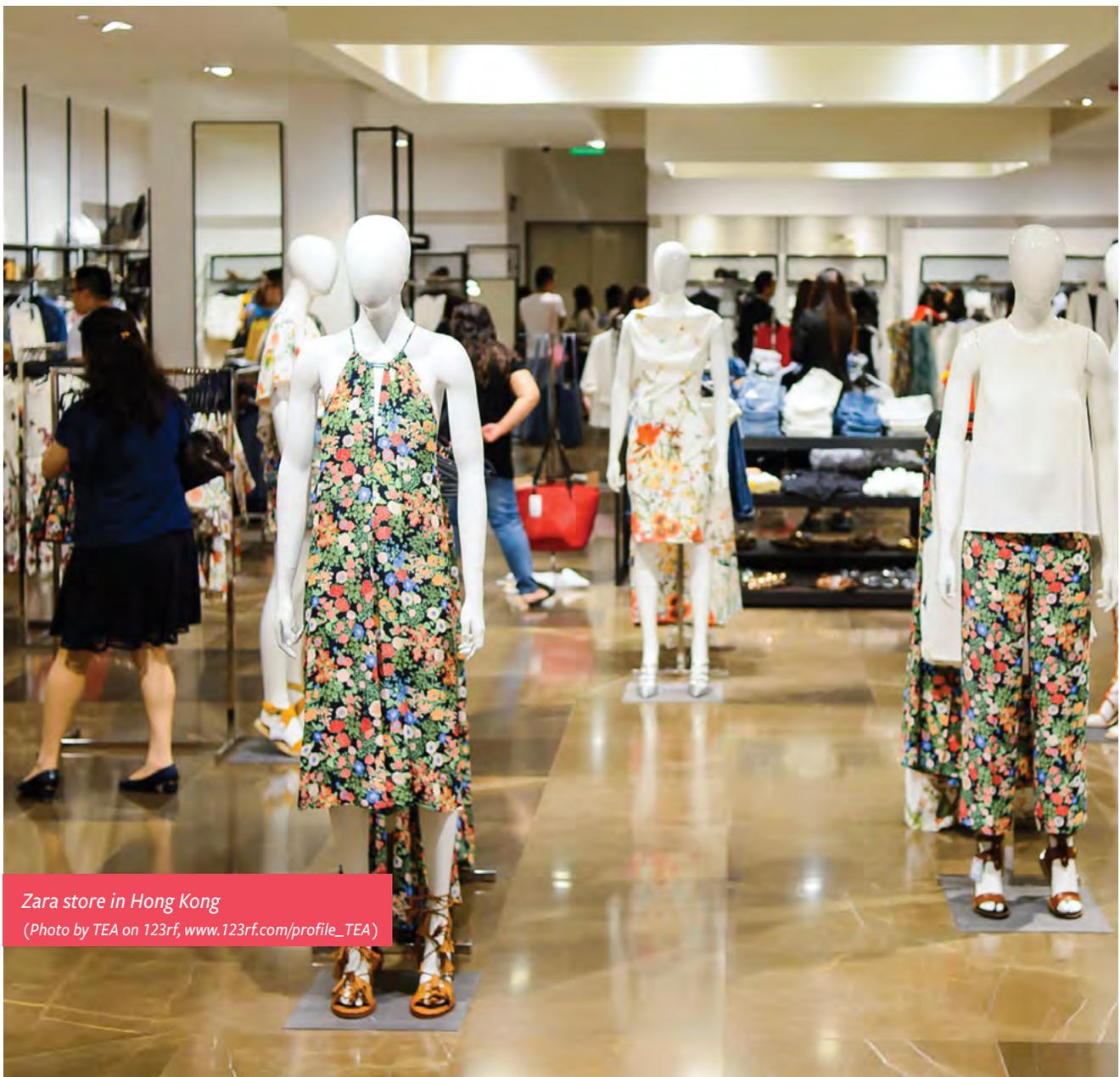
Clark advises printers to take a hard look at local retailers and brands, investigate what they are doing with on-demand production, and look for opportunities to test

on-demand garment creation. For wide-format printers, creating entire garments might not be the type of job you had in mind when you got into this space, but it is a vertical that bears watching. It has great potential to be a lucrative niche for those who get in at the right time, with the right equipment, and foster the right relationships with partners and customers.

LEARN MORE

"The Wide World of Fabric Printing" was originally published by *Printing News* and is reprinted (abridged) with permission.

Read the original article at printingnews.com/article/12338800/the-wide-world-of-fabric-printing.



Zara store in Hong Kong

(Photo by TEA on 123rf, www.123rf.com/profile_TEA)

Automating Your Shop

Boost Profitability with a Print MIS

Stephen McWilliam, Executive Vice President, Avanti



As a print and marketing services provider, you have a lot going on. Chances are you're managing a variety of print types including offset, large or wide format, digital, and direct mail. Upstream, you're offering creative services to feed print, which requires managing data.

You also may be offering fulfillment services and solutions. All of this impacts your business processes, from quoting through to reporting.

You're also likely integrating print with other highly-customized and personalized programs. The combination of all of these factors can create a lot of pain in your operation as you're continually faced with the challenge of maintaining numerous spreadsheets, applications, and databases to run your business without having one source to access and control them.

What can you do to get ahead of the game and drive more jobs through your shop while keeping your customers, staff, and bottom line thriving? As you look around, you see more and more owners investing in automation via a print management information System (MIS) to solve these challenges. And yet, you still can't help but wonder if it's all worth it. Implementing a print MIS is a time-consuming and very resource-intensive change. Yet, if you don't make the change and your competitors do, will things only get tougher? You know it's probably the right thing to do, but how do you know that, after all that expense, the ROI will come? How long will that take?

The truth is that automation is the key to profitability. As one of our customers keeps telling us, "You can't touch a \$500 job 10 times and expect to make money." In fact, we coach people that "if you have to repeat it, figure out how to automate it."

Print MIS is technology that spans your operations and helps you connect all your critical (and often disconnected) software applications, systems, process, and tools. By connecting and integrating these pieces and providing information for job tracking, estimating, reporting, and customer relationship management (CRM), a Print MIS helps businesses centralize activities so they can more effortlessly navigate the volume of information needed to drive success.

A print MIS can provide the foundation that allows you to scale efficiently as you continue to grow. With the right print MIS, you gain the ability to connect your "islands of automation" and eliminate the errors inherent to the manual re-entry of data. It enables you to work more efficiently, control costs, and move more jobs through the shop with ease while having access to the real-time data you need to make informed business decisions.

The key to increased productivity is efficiency and automation. Any time that data can be passed seamlessly and automatically between departments, equipment, and applications, you reduce turnaround time.

It is critical to have the most current, accurate information about the job and an easy way to communicate what actually happens on the job, internally and externally, as it makes its way through the shop. By bringing a customer-centric view to the production system, your organization is empowered to manage and communicate critical sales, marketing, and customer information essential for continued success and future growth.

With real-time visibility to business-critical information, your sales and client services teams can answer customer requests instantly. Your production team can better manage the distribution and control of finished goods—goods your plant produces, goods you purchase from a supplier, and goods already owned by your customer. Marketing can identify your most profitable customers



for targeted campaigns as well as manage and track your lead generation efforts. And you can manage your business better with improved productivity, reduced costs, increased revenue, and higher customer satisfaction.

For Bob Rottner, CFO of Sull Graphics, the ROI was all about time savings. Positioning themselves as a “one-stop shop” near Atlanta, Georgia, Sull offers a wide variety of services that include digital and offset printing, finishing, and marketing services including e-mail marketing and pURL campaigns.

For Rottner, the time savings from his print MIS implementation were felt across the board. Each of his customer service reps were able to cut 15 hours out of their week by having access to all their customer’s jobs and information at their fingertips instead of having to chase it all down. By having all of the information that comes in with an order automatically appear on each invoice (as opposed to needing someone to re-input the information), he was able to drop his time spent reviewing billing before sending it out from 13 hours/week down to just one hour. Importantly, Rottner himself saved 15 hours/week of his own time since implementing a print MIS.

Printing and Marketing Group Inc. (PMI) of Union City, California, offers creative services, printing and finishing, mailing services, an online web-to-print portal, and more. For them, after implementing a print MIS, order entry and shipping experienced the biggest time savings—as much as eight hours per day just in order input, tracking, and manual tasks. Instead of spending time on these manual tasks, PMI is continuing to develop its online presence, meaning they can focus on building the business rather than simply getting jobs done.

Investing in a print MIS is a big decision. And while there is no doubt that it involves a tremendous level of effort, we

have plenty of examples where it has laid the foundation for growth in revenue, profits, and improved customer satisfaction.

At Avanti, we’ve helped hundreds of printers significantly improve profitability with our award-winning JDF-certified print MIS. Avanti Slingshot helps you deliver more jobs in less time with the confidence in knowing that every aspect of your shop is integrated into one powerful print MIS platform.

Is there an ROI for YOUR shop with a print MIS? Ask Avanti to find out.

ABOUT THE AUTHOR

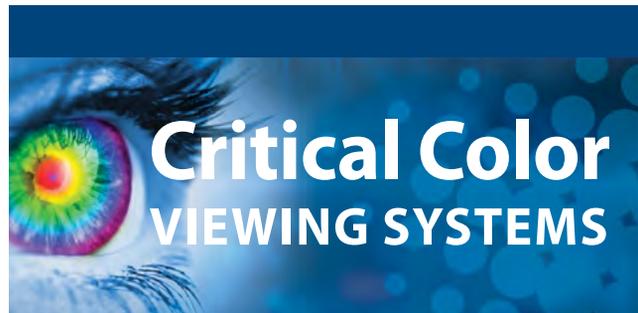
Stephen McWilliam is the executive vice president for Avanti, directing all strategic marketing activities as well as Avanti’s Alliances and Partnership Strategy. His extensive market knowledge relating to the high technology and the printing industry has helped him author numerous articles in industry publications. McWilliam is a regular speaker on topics such as print shop automation, web-to-print technologies, and leading high-growth organizations. When not busy working in the printing industry, he is a very avid bagpiper.

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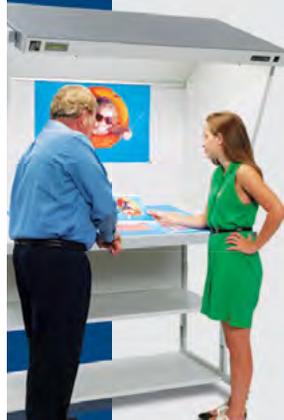
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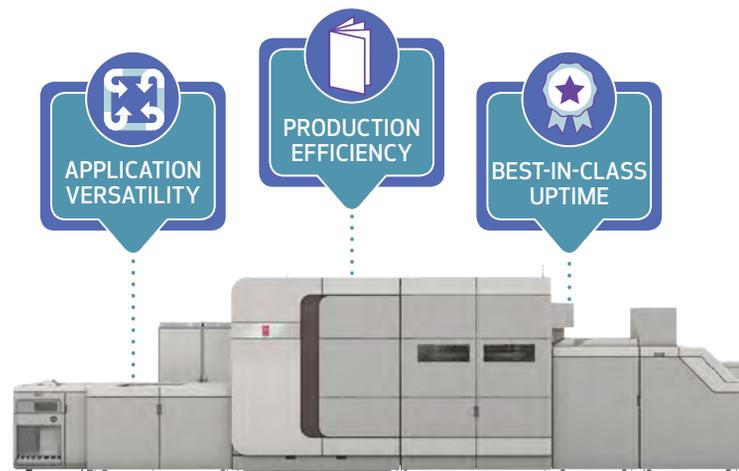
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This year we are pleased to present the **2017 Printing Industries of America InterTech™ Technology Awards** recipients. Twenty-six technological innovations were presented for consideration and fourteen were selected to receive honors by our independent panel of judges. 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 judged against specific 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,” said Jim Workman, vice president, Center for Technology and Research for Printing Industries of America. “We assume all of the technologies are excellent performers, but which ones are truly innovative? That’s the question the judges grapple with.”

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 Gala, Sunday, September 10, 2017 held in conjunction with PRINT 17 in Chicago, Illinois.

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An independent panel of notable decision makers named these technologies deserving of a 2017 InterTech Technology Award. The innovations listed here are expected to significantly advance the production of the graphic communications industry in the near future.



INTERTECH
RECIPIENTS

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XP Series™ LED-UV Curing Modules

AMS Spectral UV - A Baldwin Technology Company

ORIS Flex Pack // Web Visualizer

CGS Publishing Technologies International LLC

ColorLogic ColorAnt 4.0

ColorLogic GmbH

Esko XPS Crystal

Esko

Gallus Labelfire 340

Gallus Ferd. Ruesch AG

Prinect Press Center XL 2 w/ Intellistart 2

Heidelberg

HP PageWide Web Press T490HD

HP Inc.

HP PrintOS

HP Inc.

JUST LED moduLight

Dual Illuminant D50/D65

JUST Normlicht, Inc.

Komori Impremia IS29

Komori Corporation

MGI AIS SmartScanner Intelligent

Registration System

MGI Digital Technology

Scodix Ultra Pro w/ Foil

Digital Enhancement Press

Scodix Ltd.

TruePress Jet 520HD

Continuous Feed Inkjet Press

Screen GP Americas

Image Test Labs - Image Grader™

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ColorLogic ColorAnt 4.0

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ColorAnt 4.0 is an open solution developed to combat a scope of inaccurate ICC profiles stemming from problematic measurement data. It is essential that profiles are based on the most accurate measurement data, and with ColorAnt's wide range of tools covering most tasks around creating, analyzing, and optimizing measurement data, high quality profiles are possible. ColorAnt can be used to create targeted measurement charts for various printing specifications including inkjet, offset, flexo, and industrial printing. ColorAnt supports industry standards such as CxF, G7, ISO 20654, and ISO 13655, and addresses specific sectors such as expanded gamut printing, packaging printing, and industrial inkjet printing.

Judges lauded ColorAnt's ability to edit primary colors without the need to go back on press to print another test chart (particularly important in packaging), make corrections based on G7 and industry standards, and support all of the popular measurement devices. It incorporates spectral measurement data optimization to address redundant patches, correct measurement errors using neighboring colors, and apply smoothing with sophisticated algorithms. The software has been



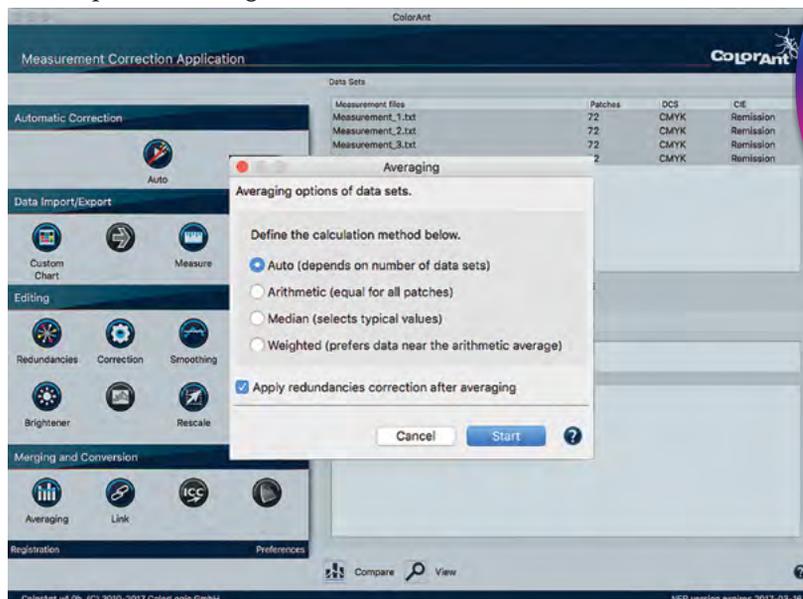
enhanced over the last four versions by combining different mathematical interpolation models.

ColorAnt can be used to intelligently average and combine several measurements together when required to significantly improve ICC profile quality. The ColorAnt "Auto" mode allows users to efficiently automate the profile process by simply loading the measurement data file and clicking the Auto button. Once processing is complete, the "Viewing" option will show each process that was applied to the measurement data. ColorAnt 4.0 includes several other specialized functions. "Edit Primaries" enables users to add, remove, or exchange process colors of an existing measured test chart by

INTERTECH RECIPIENTS

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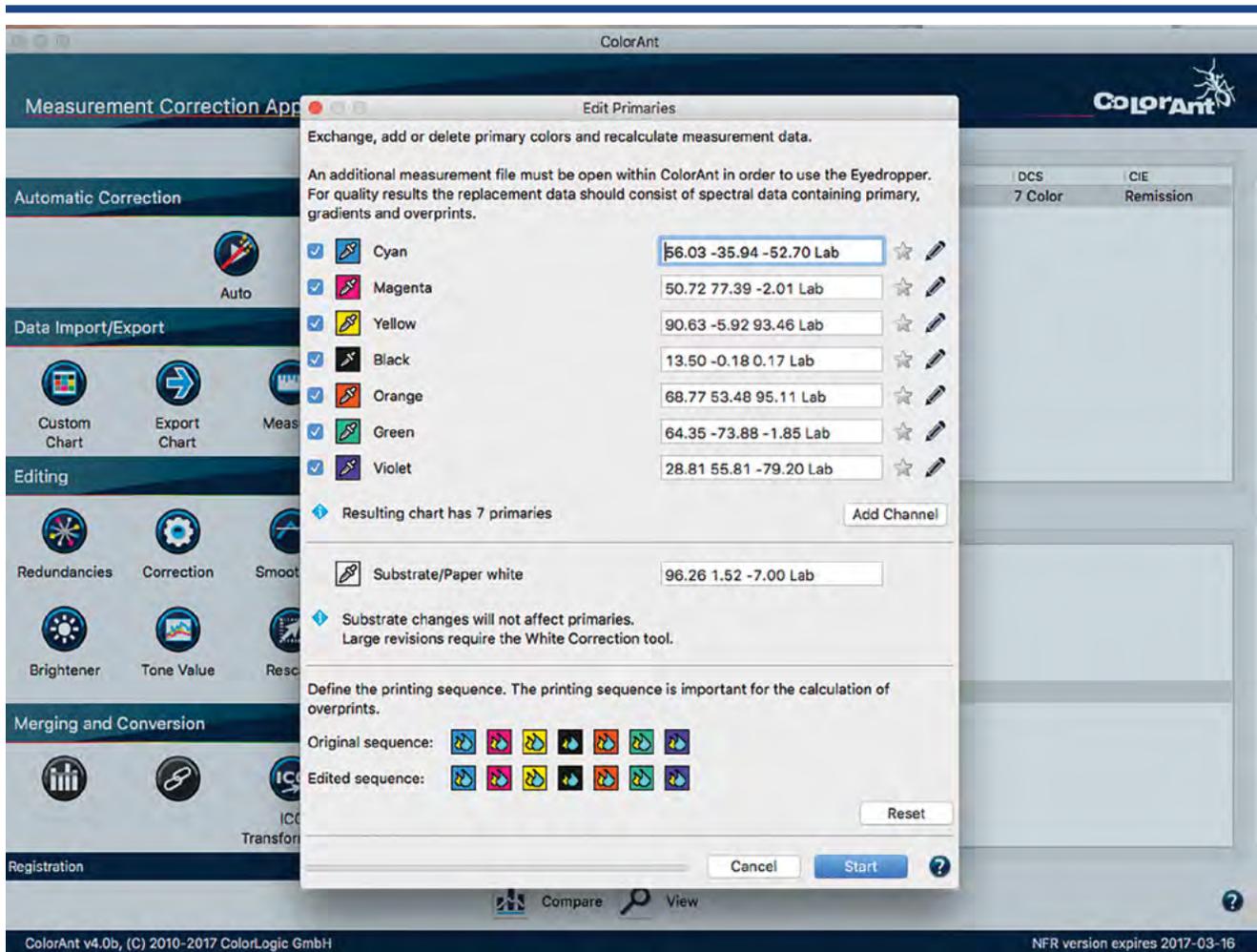
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► USER COMMENTS

The quality improvements based on the outstanding measurement data correction in ColorAnt is essential in the LFP area."

Frank Dröge,
Prepress Manager, backesDruck



► USER COMMENTS

The ICC transformation (RGB to CMYK / CMYK to CMTK) is incredible! The time we previously spent to solve non-color-managed production issues from external creative agencies was a real problem. We now work with more confidence since we are able to normalize all the PDFs and images we receive.”

Axel Roberts,
Prepress Manager, Ubisoft Entertainment

simulating the change in process colors using a color model to reflect properties of the output process. “Tone Value” adapts measurement data to a print standard so that the generated profile reflects the print process in the best way possible, while “Rescale” allows users to place several sets of colors on one page, measure and average them, and then create a full-sized test chart such as ECI2002 or IT8/7-4.

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The Esko XPS Crystal offers improved flexo plate printing consistency and quality by utilizing an innovative UV LED exposure technology. Plate consistency is a key factor in achieving and maintaining optimal print quality with flexo plates, but inconsistent light sources and variable timing between back and main exposures had limited achievable quality, which the XPS Crystal addresses. The system comes with pre-programmed main exposure parameters for a multitude of popular compatible flexo plates.

Unlike traditional light apparatus, the LED UV light technology provides a consistent light source and nearly concurrent back and main exposure to deliver relief and image consistency combined with perfectly formed flat-top dots. Additionally, UV LEDs do not need warm-up time like traditional light bulbs. Most manual steps in the process are automated with the Esko XPS Crystal system. After measuring floor thicknesses and inputting those values, the software is able to interpolate the exposure setting needed to deliver any relief the operator desires.



For the back exposure, the operator performs a step test by processing the plate, measuring the plate thickness, and entering the data into the system. Operators enter the desired relief depth and the system determines the correct exposure based on the step test.

The XPS Crystal user interface makes operating the machine relatively easy. When connected to the CDI, the

► USER COMMENTS

We are able to offer printers the ability to create high quality flexographic packaging that stands up to gravure printing. It has become a true marketing tool for us with our customers.

Enzo Consalvo,
Managing Director, Inci.Flex





entire imaging and exposure process can be completely automated, cutting operator intervention time in half. In addition, works in progress, job status, and queues are shown on screen, limiting the need for highly experienced operator oversight.

Time saved because of the consistency and long life of LEDs, automated manual steps, and workflow management help printing companies reduce lead times, achieve better quality, and cut plate remakes.

► USER COMMENTS

In our opinion, UV main and back exposure in one unit represents a milestone in flexographic plate-making. It improves plate exposure quality and ensures extremely consistent flexographic plates.

Manfred Schrattenthaler,
Managing Director, Glatz Klischee



Gallus Labelfire 340

Gallus Ferd. Ruesch AG • St. Gallen, Switzerland • www.gallus-group.com

The Gallus Labelfire 340 combines the speed of flexographic printing with the efficiency of digital printing. The digital technology facilitates the processing of variable data and versioning in label printing, which supports the cost-efficient production of short runs. UV curing enables the Gallus Labelfire 340 to be an integrated label converting system, able to varnish, embellish and further process labels from the roll to the finished die-cut label in a single production operation.

The technology uses a UV inkjet head to produce offset quality at a 1200 x 1200 dpi true native/physical resolution, which offers a real advantage in printing small symbols, characters, fine lines, and gradients down to zero percent. The smallest droplet size in the printing industry to date results in smooth, satin-finished surfaces; improved ink adhesion and curing; and minimal ink consumption. The seven-colors-plus-white UV inkjet printing system allows users to match 96% of the Pantone color gamut without switching to spot colors. The system runs at up to 50m/min with no impact to resolution quality. Path rollers, pressure arms, and a cooling roller enable the processing of temperature-sensitive and thin substrates.

In addition to the UV inkjet technology, one user-friendly operator interface controls both conventional and digital modules, allowing users to manage the entire machine system easily with one operator. The converting systems for postpress operations that are normally located downstream are no longer required,



leading to more efficient and cost-effective label production. Costs are further reduced for ink due to the ability to print static areas on versioned labels with an integrated flexographic printing unit. Primer costs are significantly reduced because most substrates can be processed without a primer application. The Gallus Labelfire 340 averages 15–20 percent lower production costs than comparable offline systems, which require two product passes including digital printing and offline converting. This and the possibility of producing several jobs without stopping the press boosts any company's production potential.

► USER COMMENTS

When I look at this machine it's a game changer from a quality standpoint. It's simply unbelievable. There's nothing else like it on the market.

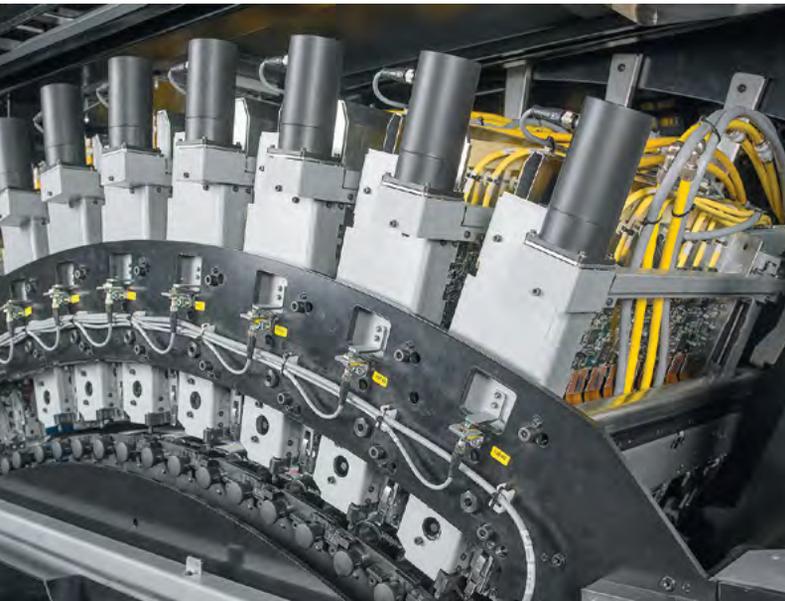
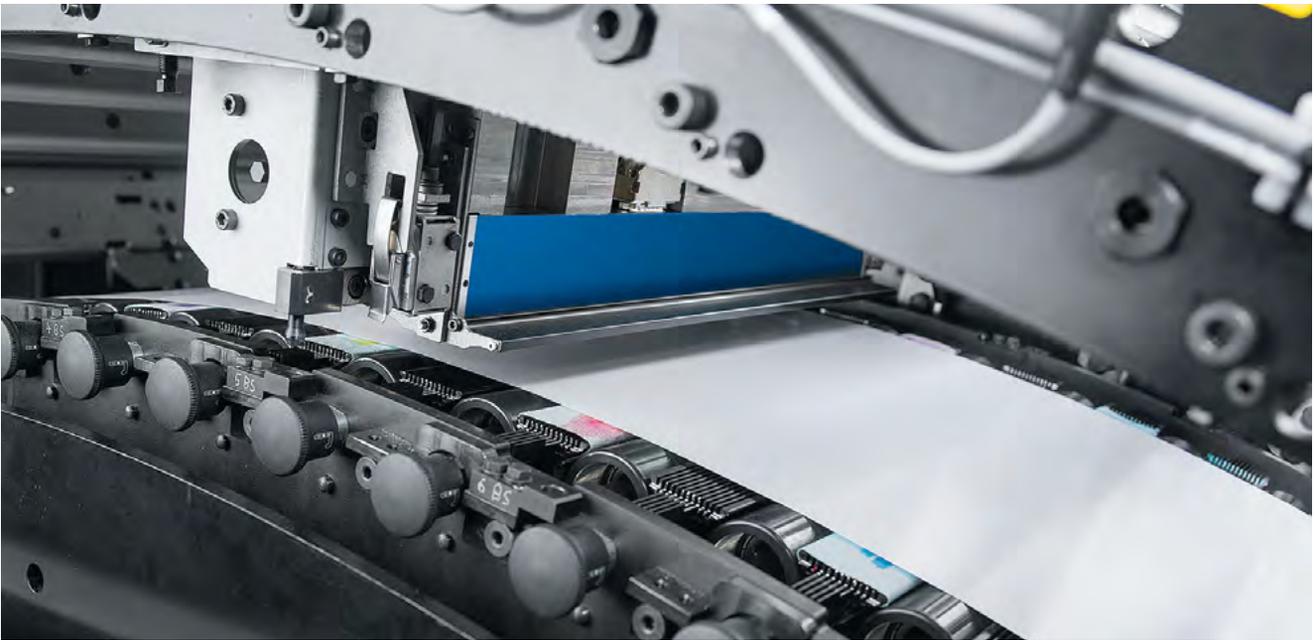
Thomas Dahbura,
President, Hub Labels

► USER COMMENTS

As a single-pass solution incorporating flexo, digital, converting, and a variety of embellishments on one single press, we have seen gains in production efficiency and print quality.

Mark Dufort,
President, Info Label, Inc.





Heidelberg Prinect Press Center XL 2 with Intellistart 2

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

INTERTECH RECIPIENT

The Prinect Press Center XL 2 with Intellistart 2 changes the paradigm of offset press operation. The technology integrates a Heidelberg offset press with software to run a “Push to Stop” workflow that results in a highly-automated printing process. With this innovation, a Speedmaster XL press operating in Push to Stop mode takes all job parameters into account, presets functions of the press, initiates the run, adjusts registration, and makes other changes without operator intervention. “The ‘Push to Stop’ approach is a game changer, dramatically improving throughput,” said a judge.

Intellistart 2 is the key component of this new functionality, which combines data, mechanics, and intelligent software to define and execute the fastest changeover sequence possible. The Prinect Press Center XL 2 with Intellistart 2 with Push to Stop shows significant improvements in total output from the press and the number of makereadies that can be completed, increasing output from the

 **HEIDELBERG**

machine by 25 percent. The press automatically starts print production and also autonomously decides when the defined quality parameters have been achieved to start good sheet production, inserting a tab to separate waste from good sheets.

Automatic makeready is completed by the press using patented technology to optimize, complete, and manage the entire job sequence via Process View. All the steps needed are automatically calculated, regardless of the complexity of change between jobs. The press starts production at the end of makeready including coming up to the target color, adjusting color, and registering to defined preset tolerances. Following the completion of the good sheets, the press initiates the automatic



► USER COMMENTS

The high automation of the Intellistart 2 has made us much more productive and we can now always consistently and automatically make ready a four-by-four job in under three minutes.

**Stefan Aumüller and Christian Aumüller,
Managing Directors,
Aumüller Druck GmbH & Co. KG**



cleaning of rollers and blankets, removes the used plates, and mounts the plates for the next job. Imagine the benefits to productivity and profitability with over 20 jobs seamlessly running consecutively without the operator having to stop the press.

In short, this technology takes operators out of the machine-tweaking routine and gives them significant new roles in managing the print process or as pressroom quality monitors.

► USER COMMENTS

Bringing Industry 4.0 level automation into our pressroom with 'Push to Stop' has been a total game changer.

**Greg Moquin,
President, Moquin Press, Inc.**

INTERTECH
RECIPIENTS

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PRINTING
INDUSTRIES
OF AMERICA
PRINT 17

A Dynamic Duo in Digitization – Recipients of the InterTech™ Technology Awards.



Heidelberg is now honored with their 37th and 38th InterTech Technology Awards for the Prinect Press Center XL 2 with Wallscreen and Intellistart 2 and the Labelfire 340 from Gallus. Both products were presented at last year's drupa for the first time – demonstrating innovations in productivity for offset printing and new applications in label production.

➔ Learn more at <http://bit.ly/HeidelbergIntertech>



HEIDELBERG

Heidelberg USA, Inc. 1000 Gutenberg Drive, Kennesaw, Georgia 30144
Phone 800 437 7388 • Email info@heidelberg.com
www.heidelberg.com/us • www.gallus-group.com

HP PageWide Web Press T490 HD

HP, Inc. • San Diego, CA • www.hp.com

The 40-inch HP PageWide T490HD press breaks down some of the biggest barriers to widespread adoption of digital inkjet printing: speed and high-definition resolution narrowing the gap between digital and offset press capabilities. HP's High Definition Nozzle Architecture, ColorBoost technology, and in-line priming has improved quality and production capacity.

The High Definition Nozzle Architecture (HDNA) featured in the T490HD allows printers to print at 1,000 feet per minute at 1,200 nozzles per inch (8,700 US letter images per minute) or at 500 feet per minute at 2,400 nozzles per inch (4,350 US letter images per minute). This is as much as a 67% increase in speed over previous T400 series presses. HDNA enhances image quality in skin tones, shadow detail, and solid tint areas. Print service providers can change these settings on a job-by-job basis. HP's ColorBoost technology provides an expansion of the color gamut of between 5-10% using existing CMYK inks, reducing client issues with color matching.



► USER COMMENTS

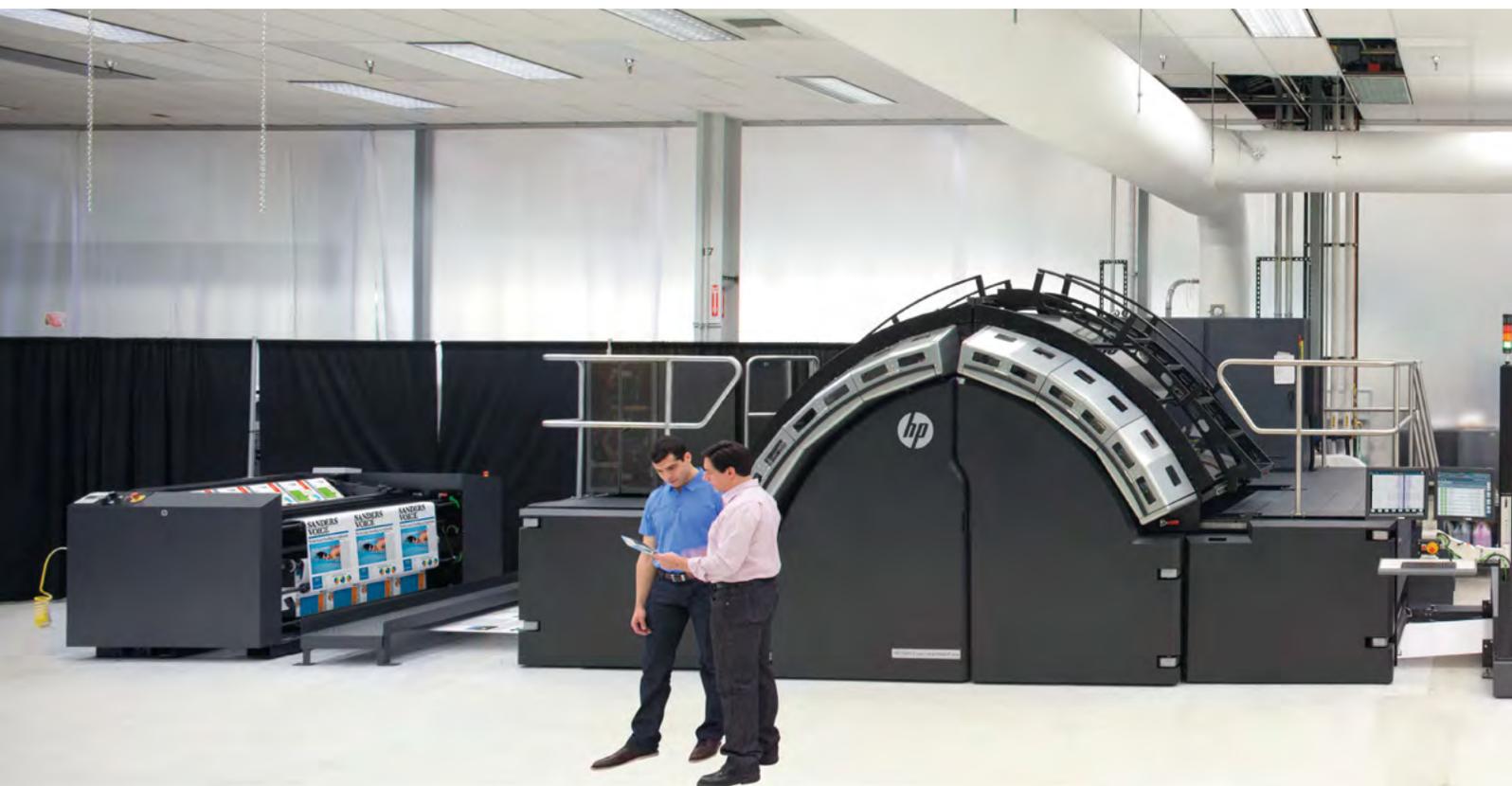
With the addition of the T490HD and HDNA print quality and increased print speed, we can now bring all of the advantages of inkjet into even more new markets with the highest print quality available.

Stephen Franzino,
Vice President of Technology
LSC Communications.

INTERTECH
RECIPIENTS

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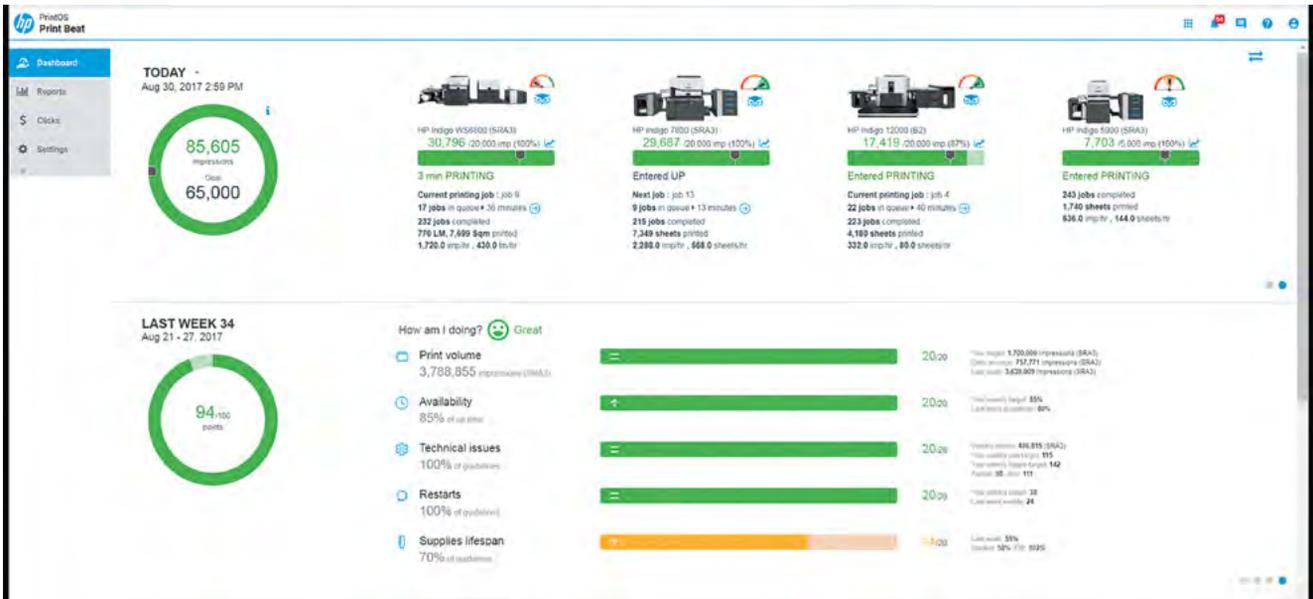
PRINTING
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PRINT 17



Additionally, the inclusion of in-line priming and enhanced drying features boosts the T490HD's flexibility and speed. In-line priming allows for expanded media compatibility including non-inkjet treated media and the option for both coated (gloss or matte) offset media and uncoated media. The HL10+ Enhanced Dryer increases productivity by reducing drying time up to 20% from traditional three-zone drying systems. T400 series press can be upgraded to the T490HD by technicians on-site limiting costly downtime for removal and replacement of equipment.

The press can print both sides of the web, inspect in-line, and use dual-roll winders with automated splicing for non-stop production. Judges saw the significantly increased speed and resolution of this 40" HP PageWide inkjet web press as an unmistakable innovation, one that combines customized print at a throughput of traditional color offset presses.





about their presses and printers and an update on jobs all in one convenient location, eliminating the need for multiple points of contact. Additionally, the PrintOS system can be operated by nearly anyone and from any connected device with minimal IT resources and knowledge.

The PrintOS Print Beat app provides users with an informed look into their operations to make smarter, informed decisions in real-time and change behavior based on personal advice that proactively suggests actions to improve quality and productivity. Another example is the PrintOS Box app, which shortens print file exchange, validation, and preflight, while improving client communication. Additionally, PrintOS Box provides a user-friendly file uploading area for client work and routes these files directly to production, reducing overhead and allowing printers to increase capacity and profitability. The PrintOS Site Flow is yet another powerful app that streamlines order submission, printing, and delivery to fulfill thousands of orders. Other applications offered on PrintOS include Substrate Manager for consistent color across different substrates, and Composer for complex

variable-data job creation, leveraging the PrintOS cloud servers.

Currently, PrintOS offers eleven different applications, which together support nearly every aspect of print production and empower print services providers to fully take control of their print business from start to finish.

Judges expect PrintOS and the array of affordable apps to be especially attractive to print service providers that currently don't own production management software solutions (it's available to HP customers with active service contracts).

► USER COMMENTS

The employees look at PrintBeat. Everyone wants to be performing at the top of their game and it puts a little competition into it.

Doug Rembold,
Digital Production Manager with iTek Graphics
an initial beta customer of the PrintOS platform

ITL ImageGrader

Technology Watch, LLC • Springfield, VA • www.imagetestlabs.com

For printing businesses, evaluating presses can feel like a headache. One printer noted that comparing presses felt like comparing “apples and oranges.” Sure, looking at specs gives companies an idea what each press can offer, but that means little when a business tries to understand which product is better for its unique needs. Even when considering purchase price, operating costs, and image quality, printers felt overwhelmed by the differences among presses. They sometimes even selected the wrong press because they simply felt like they didn’t have the right tools to select the proper printer.

The Image Test Labs ImageGrader Application Suite takes all the guesswork out of evaluating different types of presses. The suite provides a scientific evaluation of a device’s performance, which ensures images of the highest quality in the way that makes the most sense for each company.

ImageGrader works by using patented image grading technology, which uses an expanding database of runs on dozens of press models, including desktop to super-wide, using offset, flexo, inkjet, and toner technologies. ImageGrader scores print runs by using the image test



output from the printer and analyzing the image quality into scores based on two dozen quality factors. The scores are combined into categories and the overall and category scores are weighted to increase the significance of low grades.

ImageGrader shows scores in three different ways to ensure ease in understanding. The “school report card” gives a press an “A,” “B,” or “C” for each characteristic. Additionally, the ImageGrader offers category and overall assessment and also histograms that compare press scores. The latter compares current scores to historical scores to provide in-depth understanding of the current technology.

Using ImageGrader to assess presses allows companies to ensure that their presses are working optimally for their individual business models. The ImageGrader Suite helps customers to evaluate individual presses, press model performance, the value of upgrades, and spot the need for service.

The judges were won over by the system’s ability to pinpoint imaging problems by comparing performance to like presses in the database and, when possible, suggest fixes.

► USER COMMENTS

Their suite of tests allowed us to compare a variety of presses. We received an unbiased report that helped with our recent nearly \$1 million acquisition.

We really like the report card approach. It was easy to read and understand. We could pinpoint the strong and weak points of every press, choosing those factors that were more important to us.

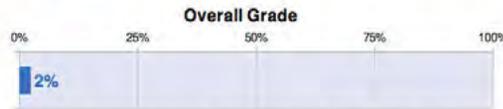
Kenneth Chaletzky,
President and CEO , Copy General



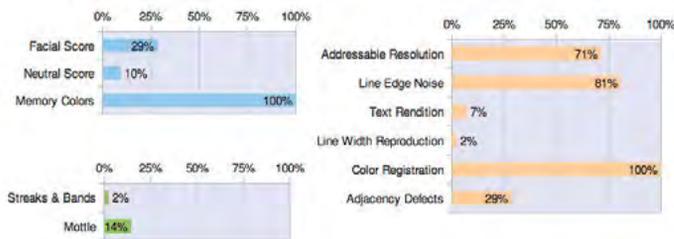
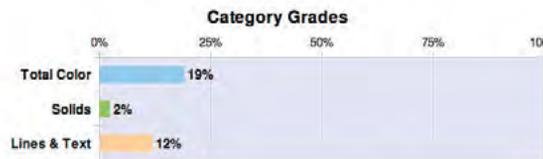
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Comparison to All ITL Digital Sheet Fed Press Runs (Percentile)

Attribute Grades	Category Averages	Overall Grade
Facial Score B	Total Color D-	C
Neutral Score C		
Memory Colors A		
Streaks & Bands F	Solids D-	
Mottle C	Lines & Text B	
Addressable Resolution B		
Line Edge Noise A-		
Text Rendition B-		
Line Width Reproduction C		
Color Registration A		
Adjacency Defects B		



BF10008 scored better than or equal to 2% of all ITL digital sheet fed press runs. And 98% of those runs scored higher than BF10008.



ITL Report Card

Attribute Grades

Facial Score	C
Neutral Score	B
Memory Colors	C
Streaks & Bands	A
Mottle	C
Addressable Resolution	B
Line Edge Noise	A
Text Rendition	A
Line Width Reproduction	A
Color Registration	C
Adjacency Defects	A-

Category Averages

Overall Grade: B

IMAGE TEST LABS - Report for Winchester Press

Serial	Print Engine	Facility	Total Color	Solids	Lines & Text	Overall
BF10010	ISO	ISO	A	A	A	A
BF10011	ISO	Cherokee	A	A	A	A
BF10012	Asahi	Asahi	A	A	A	A
BF10013	Asahi	Asahi	A	A	A	A
BF10014	ProJet	Asahi	A	A	A	A
BF10015	ProJet	Stone Valley	A	A	A	A

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JUST LED moduLight Dual Illuminant D50/D65

JUST Normlicht, Inc. • Langhorne, PA • www.justnormlicht.com

The JUST LED moduLight provides flexible viewing conditions for the evaluation of printed materials exceeding International Standards Organization (ISO) 3664:2009. The technology combines hardware, software, and optical advancements to address limitations of conventional LEDs and fluorescent fixtures, providing the precision and repeatability required when viewing printing on a variety of substrates and varied ink types. The luminaires are available in a variety of configurations including overhead luminaires, tabletop viewers, viewing booths, and viewing walls.

The technology uses multiple arrays of LEDs manufactured to reproduce different portions of the light spectrum. These chips are combined and controlled during the manufacturing and assembly



**VISUAL COLOR
MATCHING SYSTEMS**



created by Just Normlicht

process to ensure output accuracy and are further calibrated with a process that tunes each fixture. The optical path is engineered to properly mix and distribute light to achieve ISO standards for spectral power distribution and illumination uniformity.

The multi-step calibration process ensures stable color characteristics, regardless of the fixture's dimming level, and a USB interface enables users to easily





adjust brightness between a monitor and the LED lamp to match viewing conditions. To further improve price and performance, the JUST LED moduLight combines a CIE D50/D65 switchable light source and the ability to enable/disable UV content on either light source, allowing a single fixture to support multiple viewing standards. In comparison to other LED technologies, the JUST LED moduLight technology conforms to the CIE D50 illuminant more precisely and is the first product to achieve the critical ISO 3664:2009 standard.

Versus conventional fluorescent tubes, which must be replaced every 2,500 hours, output of the JUST LED

moduLight is guaranteed for six years or 50,000 hours. This longevity reduces costs associated with replacement lamps, maintenance, and labor to track lamp hours. Additionally, light output quantity and quality remain constant during the entire product lifespan and lamps do not require preheating or warm-up periods prior to use. LED luminaires are more efficient to produce than fluorescent tubes and don't generate or require disposal of toxic mercury waste. Because of these inefficiencies, a move to LED lighting fixtures like the JUST LED moduLight seems all but certain.

Komori Impremia IS29 Sheetfed UV Inkjet Digital Printing System

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

The Komori Impremia IS29 is a 29-inch (B2 size) sheetfed digital printing device combining the consistent capabilities of digital inkjet printing with the sheet perfecting and durability of Komori's offset presses. The IS29 offers razor-sharp photos and text, high-quality color blocks, and instant curing of UV inks, making printed sheets immediately ready for finishing and reducing the need for additional post-coating of mail pieces. It was developed in partnership with Konica Minolta and uses a Konica Minolta inkjet system and digital front end (DFE). The 1200 x 1200 dpi piezo-electric print heads produce multi-level droplets of UV ink down to four picoliters in size.

KOMORI

Impremia IS29

KOMORI CORPORATION



range of substrates without pre-treatment of stock or additional post-coating. This substrate diversity includes many plastics and synthetics previously done only on wide-format machines. In addition, the IS29 can reduce makeready time, as the first sheet printed looks exactly the same as all the other sheets in a job. All of these elements combine to make the Impremia IS29 capable of short-turnaround, on-demand printing projects.

► USER COMMENTS

As a user of both offset and POD, we have come to recognize the ability of IS29 of complementing the two technologies and its potential of creating fusion between our offset and digital operations.

Masahiko Ogino,
Director, Technology Division,
Mizukami Insatsu Co. Ltd.

The IS29 was designed to address market demand for an inkjet device that can produce 6-up imposition of full-bleed letter documents while integrating the sheet perfecting mechanisms used in offset presses. The innovative adaptation of this technology to a digital printing device gives the IS29 the same front-to-back, single-pass perfection of sheets on the fly. Other B2 inkjet presses require two passes to print a two-sided sheet. Instant curing of the UV ink enables immediate handling and finishing of the perfected sheet. Using LED curing technology, the UV ink is instantly "dried" on the surface of the project substrate with a durable ink film, giving the IS29 the ability to print on a wide

► USER COMMENTS

We are constantly expanding the range of print applications we can produce on the Komori IS29. Its ability to print on plastics in perfecting mode allows us to print high-value jobs. These capabilities give us a distinct advantage in our marketplace.

Rick LaReau,
Worth Higgins & Associates

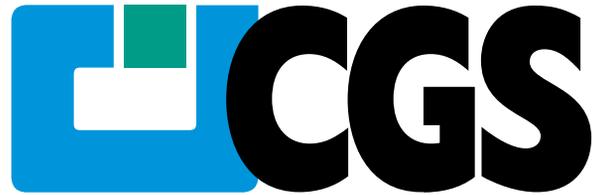


ORIS Flex Pack // Web Visualizer

CGS Publishing Technologies International, LLC • Minneapolis, MN

www.cgsusa.com

ORIS Flex Pack // Web Visualizer is a proofing and prototyping system for mockups of flexible packaging, labels, shrink sleeves, folding cartons, and containers, regardless of the final printing process. Utilizing the ORIS color management system, a Roland eco-solvent printer, ORIS XG (extended gamut) inks, and CGS substrates, users can produce color accurate proofs



and prototypes of proposed packaging designs from 3D design to final prototype.

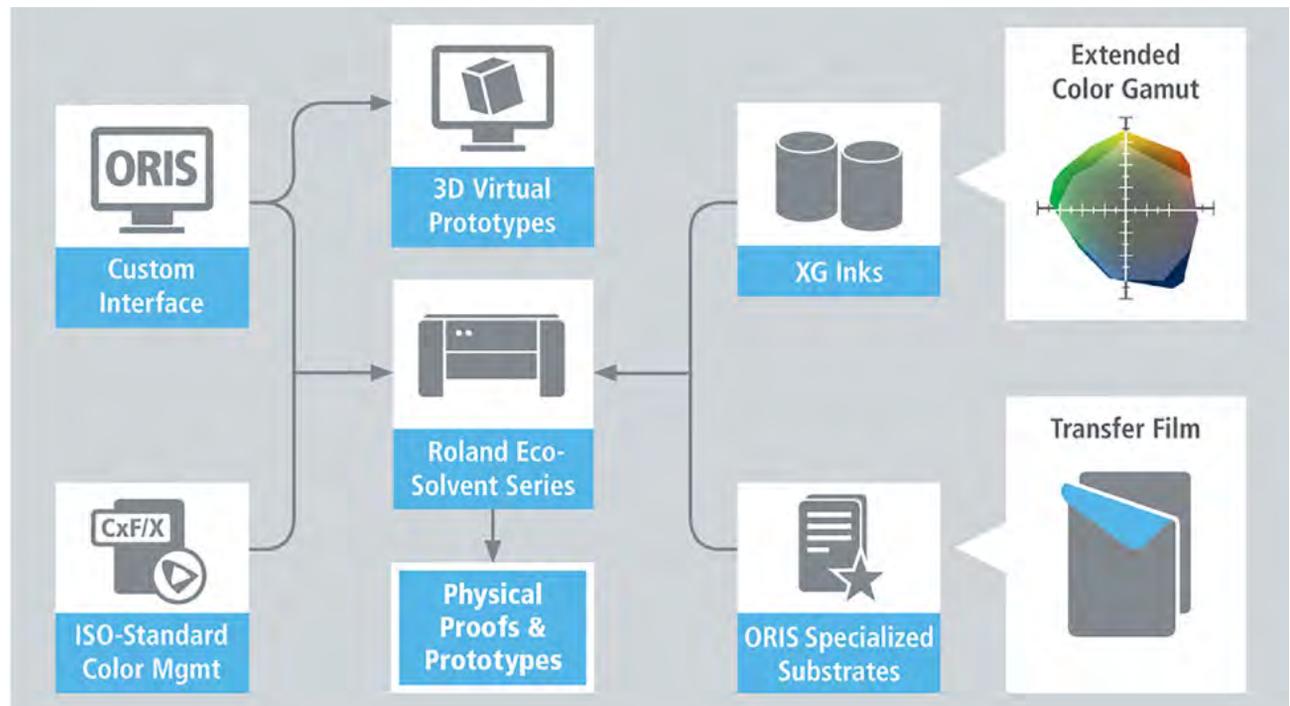
CGS Publishing Technologies has created a solution to the difficult and expensive proofing process in consumer packaging that is efficient, accurate, and cost effective. With color management being one of the most important aspects of packaging, ORIS color management uses an iterative process to measure, profile, calibrate, and maintain consistent color output on proofing devices—simulating press output for accurate color proofing and

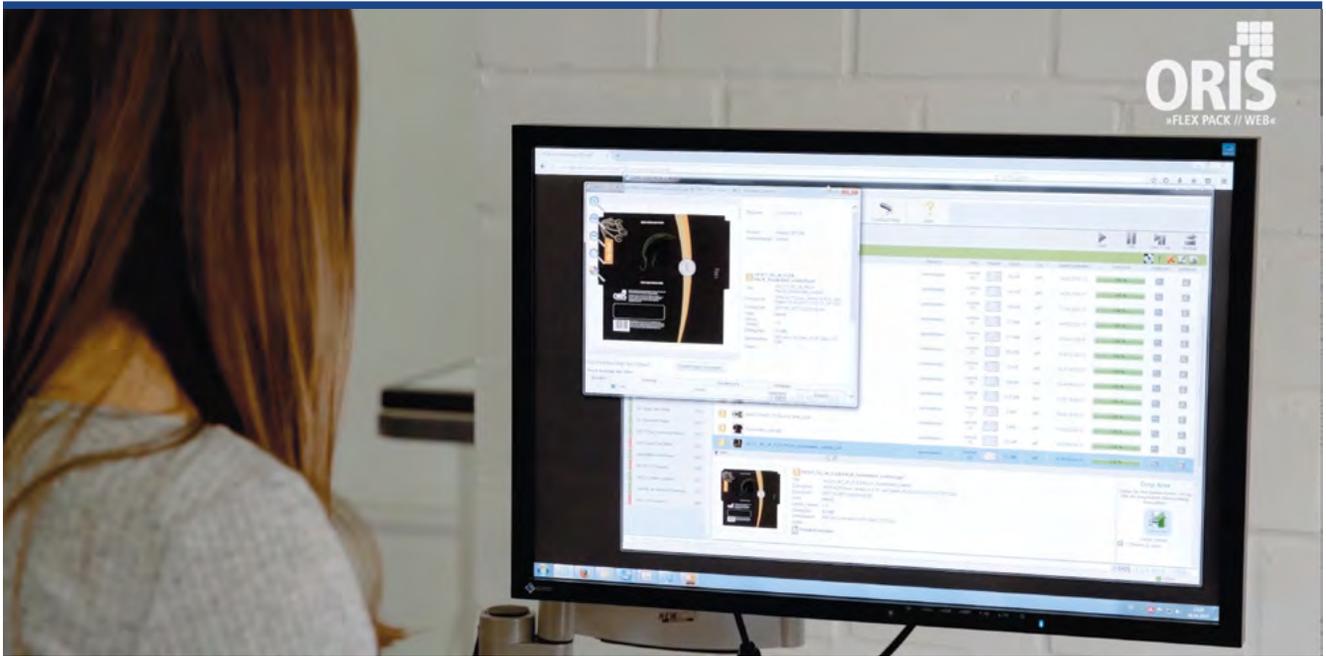


► USER COMMENTS

The speed and color accuracy of the ORIS RIP is remarkable; the system can easily produce precise overprints and render spot colors accurately. The result is a physical prototype that allows brand owners the opportunity further upstream to enjoy the actual look and feel of a new package design before it hits the shelf.

John King, Operations Manager
The ALC Group

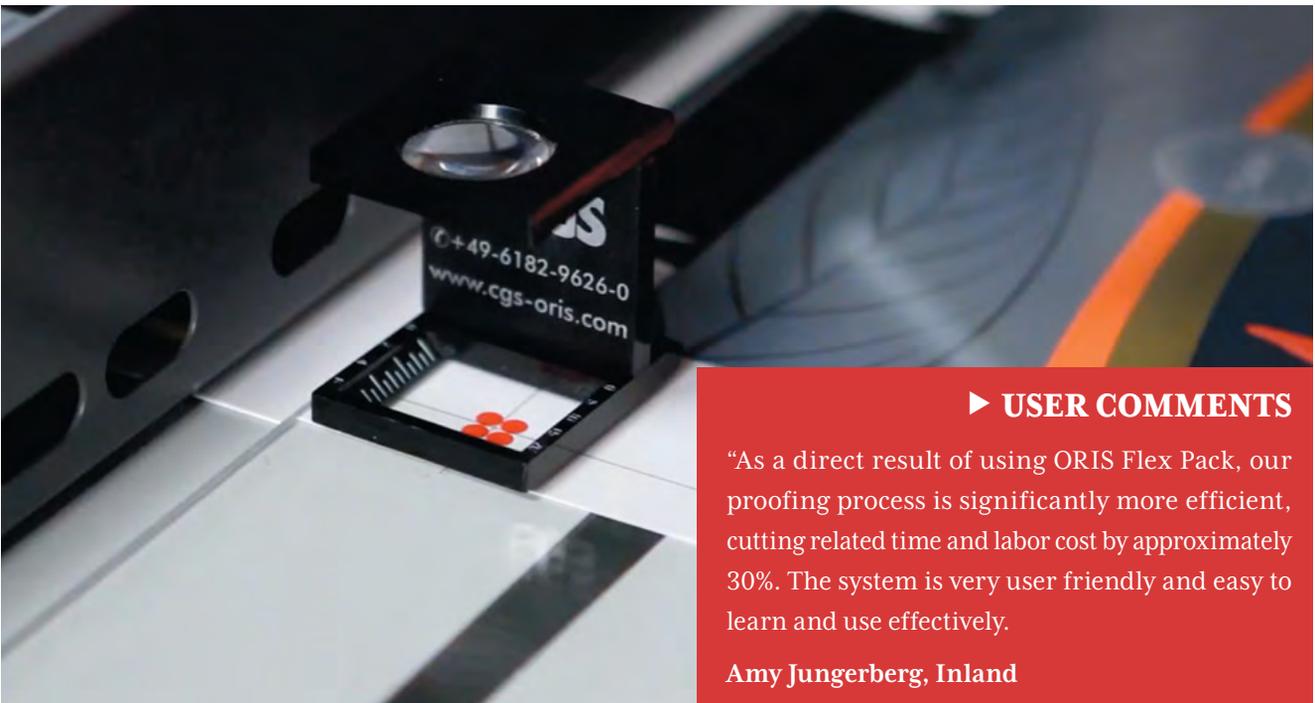




prototyping results. The simple user interface can be used by operators with a basic understanding of color principles, but does not require advanced color expertise. ORIS uses spectral measurement of ISO-standard targets to precisely define and manage color output.

The ORIS XG inks have been specifically formulated for proofing applications on the Roland printer. They include a redefined CMYK ink set, plus ORIS extended-gamut orange and green inks. The resulting color gamut is sufficiently large enough to encompass almost all

Pantone and other brand spot colors and to simulate all packaging-related print conditions. CGS also offers a variety of custom substrates for ORIS Flex Pack // Web Visualizer output on Roland printers, including glossy and semi-matte paper and cardboard, clear film, embossing foil, various metallic films, adhesive white vinyl and polyester, and clear polyester shrink foil. For media not encompassed by these materials, CGS also offers ORIS Transfer Film, a color-neutral media that can be laminated onto metal and other printing stock substrates.



► USER COMMENTS

“As a direct result of using ORIS Flex Pack, our proofing process is significantly more efficient, cutting related time and labor cost by approximately 30%. The system is very user friendly and easy to learn and use effectively.

Amy Jungerberg, Inland

Scodix Ultra Pro with Foil Digital Enhancement Press

Scodix Ltd. • Rosh Ha'ayin, Israel • www.scodix.com

The Scodix Ultra Pro with Foil digital enhancement press can print eight different applications and combinations of applications on one system to produce a variety of foil, gloss, and 3D elements. The judges were struck by the uniqueness of several applications; Scodix Braille™ is a new way to print documents for the visually impaired, Scodix Crystals™ uses a high build polymer to create attention-getting 3D sparkles, and Scodix Cast&Cure™ produces dramatic holographic-looking 3D images.

Before the availability of Scodix Ultra Pro and other digital enhancement presses, foil applications often required outsourcing or costly and time-consuming makeready processes using molds and dies. Scodix Foil



deploys a wide range of readily-available hot and cold industry standard foils to produce colors such as gold, silver, bronze, and more, which can be coupled with offset, digital, plastics, laminated/non-laminated, and coated/uncoated applications. The press automatically processes a wide range of paper formats and substrates with no additional setup.

The press uses a clear polymer that can reach a height of up to 250 microns, 100 times higher than conventional selective varnish, and has the ability to vary the density of the polymer from 1-100 percent in a single pass. These capabilities allow users to take advantage of the above-mentioned applications such as Scodix Crystal™. The system can achieve 99 gloss units, the highest gloss available for printed materials.

Scodix Ultra Pro with Foil digital enhancement press gives printing companies exciting possibilities to create high-value print at a low per-unit cost.

► USER COMMENTS

Scodix Foil™ adds a touch of prestige to products, whether embossing, using Scodix Sense selective varnishing, adding high gloss, or through the remarkable quality delivered by foils.

Olivier Venien,
CEO, Micro Lynx





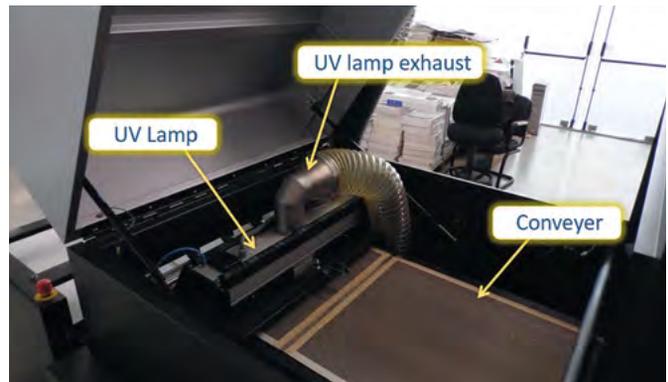
► USER COMMENTS

The ability to produce variable on-demand foil, foil on foil, tactile materials, cast & cure, and UV coatings up to 250 microns thick are all very unique. The entire team here at Dreamworks is very excited about this new technology. Our new Scodix System is a great fit for us and our clients.

Dan Luka,
CEO and Co-Founder,
Dreamworks Graphic Communications

► JUDGES' ANALYSIS

Digital enhancement presses give users new abilities to differentiate their products and price work at a premium. The Scodix Ultra Pro makes it practical to produce special 3D and foiling effects in smaller quantities, and some applications are not possible any other way. The result is a tactile finish that studies have shown can positively influence a buyer's decision.



The MGI AIS SmartScanner Intelligent Registration System

MGI Digital Technology • Melbourne, FL • www.mgiusa.com

The MGI AIS SmartScanner Intelligent Registration System uses advanced computer programming techniques to create a breakthrough in print registration. The technology works to unify traditional and digital print processes including offset, lithography, flexography, toner, and inkjet technologies to optimize postpress finishing. As of September 2016, the AIS technology has been standard on all JETvarnish 3D digital enhancement presses and is available as an upgrade for prior installations.

Using iterative algorithms, the AIS processes individual sheet calculations at 5 billion functions per second. Adaptive inkjet head management controls and analytic image tools work together to create a new print file for each sheet (piece) run on an MGI digital enhancement press. The SmartScanner automatically adapts and adjusts the inkjet head to deposit varnish and foil for each sheet based on printed ink impressions and physical



substrate characteristics. It is capable of correcting for hundreds of anchor reference points on each piece instead of the typical 2–3 points in traditional lead edge and side guide mechanisms. This functionality increases substrate compatibility with paper, plastics, synthetics, lamination, and metal stocks.

The AIS eliminates more than 80 percent of operator setup time spent on traditional registration processes, reducing makeready waste. Typical job setup time is between 1–3 minutes with properly calibrated installation and pre-loaded job files. It eliminates the need for registration marks and optimizes quality by treating each finished piece as a separate print job.



► JUDGES' ANALYSIS

The AIS SmartScanner is a new JETvarnish 3D registration technology solution for enhancing offset, flexo, and digital printed material. It automatically adjusts the placement of varnish (clear ink) and foil based on actual ink impressions and substrate characteristics (shrink, skew, stretch, etc.). It eliminates the need for registration marks and optimizes quality by treating each finished piece as a separate print job.

A judge commented, *Waste is very expensive and the SmartScanner is an innovative way to avoid it.*

► USER COMMENTS

This artificial intelligence registration technology is a revolutionary technical leap over existing systems in the industry. It requires no registration marks and treats each sheet like a separate, unique job.

Dann Ramstein,
General Partner of ICA

The AIS achieves variable data finishing (VDF) effects above that of traditional die-stamping and screen-UV processes—with up to 32 textures of embossed foil per piece, with varying heights up to 200 microns. To increase efficiency, the AIS can use an “Image Acquisition” function without a native print. It can register a job on the first sheet and then create a mirrored print file library for future embellishment applications. Each new job should benefit from improved accuracy from a growing reference library of computer data. Different jobs with different substrate stocks can be stacked together on the feeder and run continuously with no changeover time or loading effort if varnish and foil layer files are preloaded into the system. Users can then quickly provide customers new application versions, variations of 2D/3D dimensional textures, heights of embossing coverage, and foil enhancement options.



Truepress Jet 520HD Continuous Feed Inkjet

Screen Americas • Rolling Meadows, IL • www.screenamericas.com

The Truepress Jet 520HD inkjet web press is a 20-inch production-class printer for the commercial print, direct mail, and publishing markets. It can deliver offset quality printing (1200 x 1200 dpi) and has a top-end printing speed of almost 400 feet per minute. What really sets it apart, however, is that specially-developed Screen ink gives 520HD owners the ability to print on the same coated litho stocks they currently use on their offset presses, without pretreatment or primer. Customers confirmed the breakthrough.

Continuous feed inkjet print engines have achieved print speeds and throughput capacities that begin to rival conventional offset presses. However, achievable image quality and the limitations of printing to uncoated stocks—or a requirement to print to premium or treated-for-inkjet stocks when coated papers were required—

SCREEN

has limited the ability and economic feasibility of the technology to reach beyond transactional mail, lower quality direct mail, and applications that do not require coated stocks such as book publishing. The cost savings from printing on commodity-grade papers and not

► USER COMMENTS

This is the first time we were able to achieve a cost-effective analysis on an inkjet press that fit into our workflow. The demonstrated quality and versatility of the new SC ink on the 520HD tipped the scale.

Geoff Eisenberg,
Executive Vice President, Tidewater Direct

INTERTECH RECIPIENTS

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PRINTING INDUSTRIES OF AMERICA
PRINT 17

Truepress Jet 520 HD



► USER COMMENTS

The speed of set up and production means that we can produce highly personalized, superb quality 'real-time' marketing products to tighter budgets and shorter lead times than previously possible.

Maurice Gelissen,
Managing Director, Nic. Oud

having to warehouse different stocks for offset and inkjet are significant.

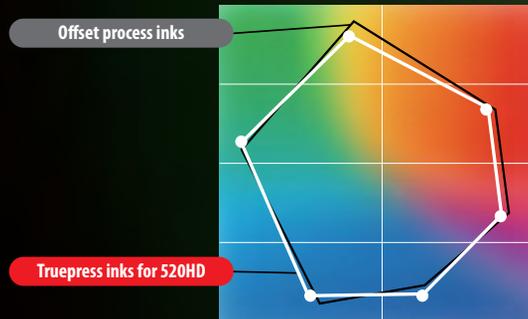
The image quality achievable by the Truepress Jet 520HD and the paper addressability of the proprietary Screen Truepress SC ink opens continuous feed inkjet to a new variety of applications, replacing both conventional offset work as well as that produced on toner-based presses. The thin film of the SC ink allows for the characteristics of the paper to perform as designed, whereas the high pigment load results in the ability to produce sufficient ink densities with low total area coverage, resulting in drying efficiencies, improved press performance, and ink savings.

The image quality and speed comes from using a 1200 × 1200 dpi print resolution and multi-level droplets, a new color management system, faster drying due to high pigment ink, and a RIP that can send variable data to the press in milliseconds.



High-density pigment inks (newly developed)

Truepress inks for the 520HD make it possible to reproduce a color gamut that rivals offset printing using CMYK inks. This delivers truly impressive photo-quality output that can not be achieved with existing high speed printer in this industry.



XP Series™ LED-UV Curing Modules

AMS Spectral UV—A Baldwin Technology Company
River Falls, WI • www.amsspectraluv.com

XP Series™ LED-UV Curing Modules enable faster production speeds, lower energy consumption, and can overcome other challenges of traditional UV and IR systems. A patented optic system ensures uniform light distribution and modules integrate readily onto new and used presses. One judge commented, "This is absolutely a leap forward from traditional UV curing."

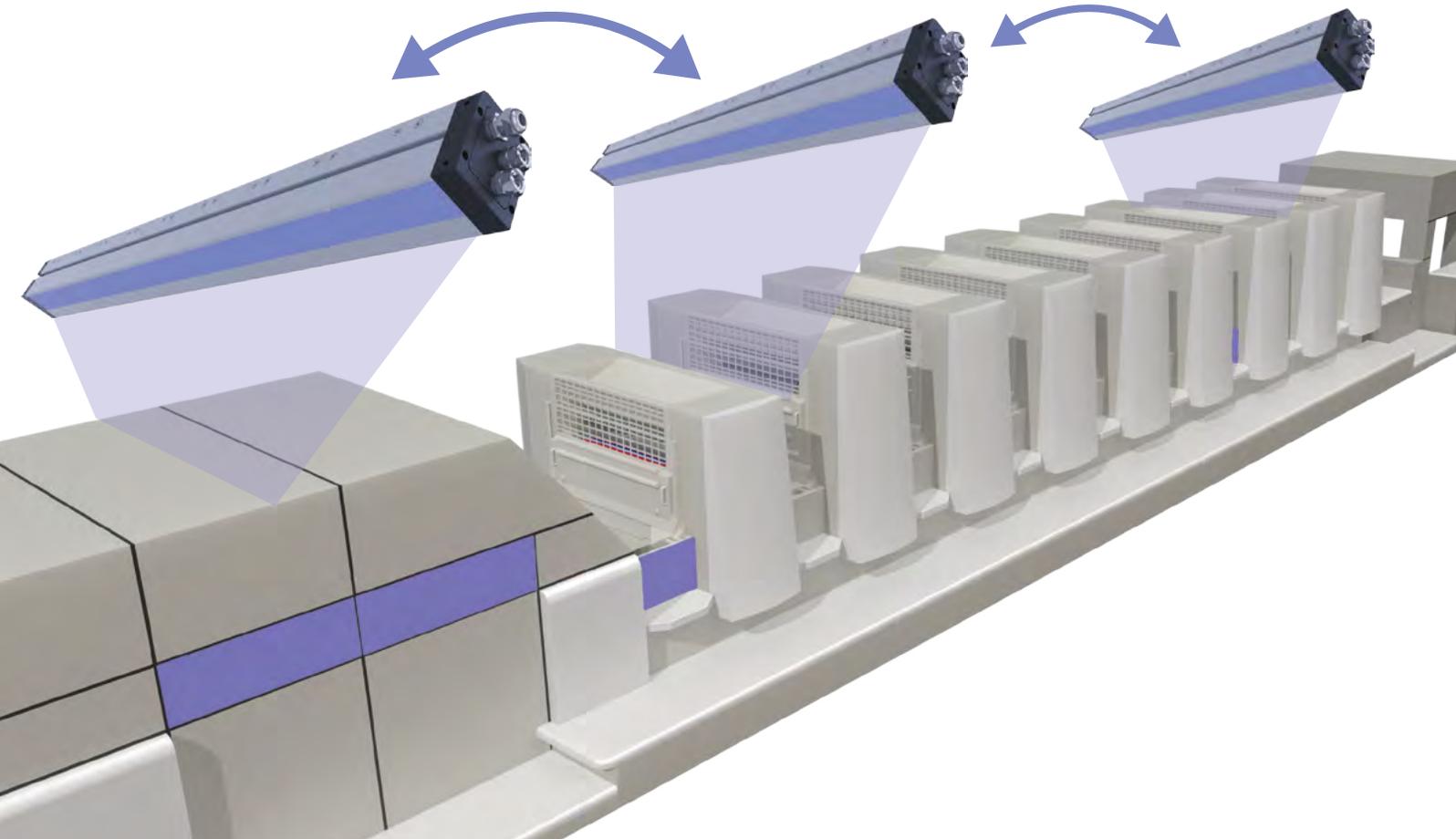
The engineering team at AMS Spectral UV set out to create a system that would provide a safer, faster, and more energy efficient means of curing. The result of their efforts were the XP Series LED-UV Curing modules that deliver high intensity curing energy from a compact solid-state device that is simple to install and use.

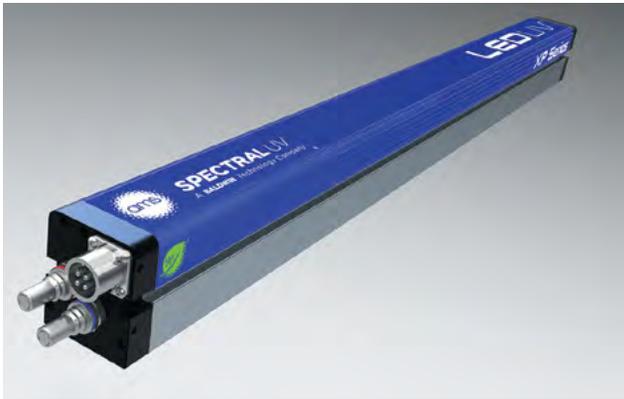


SPECTRAL UV
A **BALDWIN** Technology Company®

The LED-UV curing modules eliminate the need for powders and spray coatings with sheetfed offset printing. They allow for faster maximum print speeds for increased operational productivity. A safer work environment is a result of the elimination of ozone emissions and the need for exhaust systems.

XP Series™ Curing Modules offer an unsegmented, solid form factor from a single unit per print station rather than multiple modules that "daisy-chain" together.



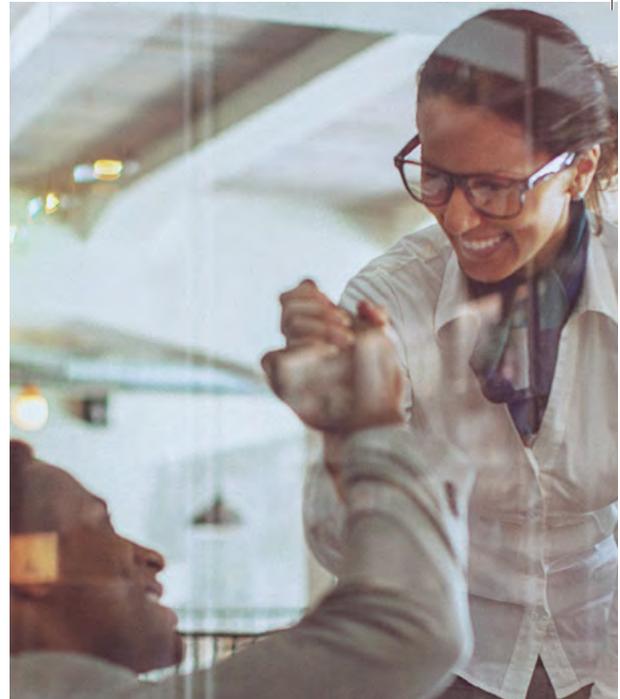


They can be installed on new or used presses that require curing systems. The modules are liquid cooled and have no moving parts that might lead to costly downtime and maintenance. Modules can last more than 30,000 hours, eliminating the need to frequently replace bulbs while providing unprecedented curing consistency. The individually replaceable LED chip diodes provide assurance of system uptime and upgradeability as needed.

► USER COMMENTS

With the LED technology we have been able to run faster and be more consistent with what we are producing. The print looks great and we are able to cut, fold, and bind when it comes off the press.

Jeffrey Hoene,
Business Manager, Kingery Press



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ChromaChecker

ChromaChecker Corp. • Forest Lake, MN • www.chromachecker.com

ChromaChecker heralds a new category of software that its developer calls a Color Conformance Platform (CCP). As a CCP, ChromaChecker enables printers to quantify and establish their own level of color quality capability, quantify their customers' color expectations, and knowingly create sellable goods that meet those expectations. ChromaChecker's architecture was conceptualized and designed in a print manufacturing framework. This framework presents a production line overview, providing numeric and graphical reporting on key variables in the print process. This CCP allows a printer to establish and maintain expected color



tolerances on every device, and over time, on any substrate. A printer can even assess G7 conformance and iterate a G7 curve, on the fly, eliminating costly dedicated print runs. ChromaChecker empowers printers to transition from a "break fix" mindset to a "proactive/predictive analysis" methodology. It is cloud-based technology that is affordable, secure, highly scalable, and can integrate with virtually any installed software and hardware. Users realize an ROI by reducing spoilage and makeready time and waste.

INTERTECH
RECIPIENTS

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PRINTING
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Dynamic Extended Color Gamut (ECG) Conversion Software Bundle for Packaging

GMG Americas • Hingham, MA • www.gmgcolor.com

Hybrid Software Inc. • Langhorne, PA • www.hybridsoftware.com

GMG Dynamic Extended Color Gamut (ECG) conversion software bundle for packaging allows manufacturers to convert graphics from custom spot colors to ECG with better results and lower cost. While several of the four primary software solutions were available individually, the software bundle provides all of the needed products in one suite, making ECG easier to implement into the workflow. The Hybrid PACKZ separates PDF or Adobe Illustrator® files into ECG separations in anywhere from two to ten colors. It converts PDFs into ECG colors while providing other prepress tools needed for ECG color separations. The GMG OpenColor technology uses spectral prediction technology to convert spectral



ink libraries to create color-accurate proofs and ECG separations in a simplified way. Additionally, GMG OpenColor allows for a centralized profile creation and management. The CMG ColorPlugin adds impressive packaging retouching tools to Adobe Photoshop®, and the GMC ColorProof provides proofing technology. Overall, the software package helps printers overcome past ECG complexities and gives them a better way to satisfy packaging customers.

EFI Corrugated Packaging Suite

Electronics for Imaging • Fremont, CA • www.efi.com

The EFI Corrugated Packaging Suite is a portfolio of scalable, integrated solutions with a core management execution system. The Suite manages the production workflows of small-sheet plants to large, full-line corrugated manufacturers and converters. Developed as a system to help foster a new era in streamlined, automated corrugated workflows, the Suite features components that range from estimating, scheduling, and purchasing and invoicing, to roll stock management, production and shipment planning, and direct machine interface for real-time reporting of machine activity. The

Suite also enables digital direct-to-board printing solutions using the EFI Fiery DFE, EFI VUTEk HSI25- and EFI Nozomi C18000, giving customers a way to create personalized products at a lower cost and in shorter time. Additionally, the Suite's mobile dashboards let people monitor production developments without being physically tethered to a desk or location.



HP Indigo 8000 Digital Press

HP Indigo • www.hp.com/go/indigo

The HP Indigo 8000 Digital Press doubles the speed of the market's best-selling, narrow-web digital label solution. The press speed is 262 feet per minute in Enhanced Productivity Mode and 197 feet per minute in four-color mode, a 2x increase in effective printing speed compared to the HP Indigo WS6800 Digital Press. The HP Indigo 8000 Digital Press uses two identical HP Indigo print engines; the first engine prints full odd frames and the second engine prints the even frames. The two print engines constantly calibrate against each other to ensure tight image registration at full speed. The 8000 lets converters meet strict brand color

standards using up to seven ink stations and a color gamut that reaches 97% of PANTONE® colors. The technology enables converters to move towards full digital production, allowing companies to utilize the HP Indigo technology for pressure sensitive labels and shrink sleeves, areas in which flexography has traditionally been dominant.



HP Indigo 50000 Digital Press

HP Indigo • www.hp.com/go/indigo

The HP Indigo 50000 Digital Press combines Indigo's known print quality with economies of scale. This oversized B1 (29.3 x 44 inch image size) duplex roll-fed press enables print companies to produce digitally what today is produced only via offset. The HP Indigo 50000 is aimed for high quality large volume jobs, such as photobooks, cards, magazines, and publishing. It is the most productive Indigo press to date, capable of printing up to 24 million A4 color pages per month, 770 duplex color pages per minute, and 2300 ppm in monochrome. It meets the needs of large print service providers for

high-coverage, high-page count creative designs, and because of its in-line priming unit, can handle virtually any paper type (coated, uncoated, glossy, matte, and even recycled). The press has an integrated spectrophotometer at both printing engines to maintain a precise color match between both sides, incorporates new print screens for smoother skin tones, and can print up to seven colors.



KODAK NEXPRESS Light Black HD Dry Ink

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

KODAK NEXPRESS Light Black HD Dry Ink comes standard with all new NEXPRESS Presses and is recommended when other fifth station options are not required. It can be exchanged with any other of the nine specialty inks for the fifth unit station and takes less than 15 minutes to do so. It helps produce smoother images and graphics while maintaining superb detail. It also helps reduce tonal banding and graininess in mid-tones and helps to stabilize neutrals and pastels. Additionally, Light Black HD Dry Ink helps extend the life of the imaging and blanket cylinders because it helps hide imperfections often seen in CMYK-only jobs. The

NEXPRESS Digital Front End controls the use of the Light Black HD Dry Ink, which means the operator does not need to oversee its use and incorporating it does not affect the workflow. When Light Black HD Dry Ink is used in photo mode, it does not require any design or prepress work for its use. Also, its use occurs at the same speed as a CMYK-only job so it enhances print quality without diminishing productivity.



KODAK NEXPRESS Opaque White Dry Ink

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

KODAK NEXPRESS Opaque White Dry Ink with Auto-White Blend functionality enables KODAK NEXPRESS presses to include white to a CMYK image by simply updating a job ticket. The job ticket uses a Kodak algorithm within the DeviceLink profile, which allows for ease of use. Once it's updated, the software adds white ink to the CMYK image, placing different levels of white ink in such a manner that it appears to the eye that the white ink is placed first on the sheet. But the technology prints the white on the sheet last. By introducing white later during printing, the press uses less white ink, which saves both time and money while

also allowing printers to include white in more jobs. Users do not need to switch between normal paper substrate and special effect

substrate or create a separate file if they use the Opaque White Dry Ink. Additionally, this product introduces white ink to the printed materials in an easy way that reduces the need for extra design or prepress efforts. Opaque White Dry Ink works on craft, pastel, metallic, and transparent stocks, allowing the production of impactful pieces at less cost.



Kodak's Extended Sheet Length

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

The KODAK NEXPRESS Press gives printers the ability to print on sheet lengths of up to one meter (39.37") with the optional external feeder which feeds directly into the paper path. The extended size makes it compatible with offset presses of the same size. The technology enables printers to provide prototyping, test/target marketing, and small batch production to complement jobs run on offset presses. This allows for a variety of short run conventional applications to be tackled in an economic way, such as pocket folders or marketing collateral with gate folds. Also, the system is designed to make

automatic adjustments on various press parameters for given substrate types, which allows for optimized registration and image

quality. This reduces an operator's need to have a hands-on role in many cases. The sheetfed process makes it easier to have quick turnarounds of small run lengths and switch substrates, providing much-needed flexibility.



KODAK Extended Life Imaging Cylinder

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

The Extended Life Imaging Cylinder replaces the former Imaging Cylinders on the KODAK NEXPRESS Press (a total of 5 cylinders, one per color), raising the average life of a cylinder to 740,000 A4-equivalent pages, a 68% increase. The new design features a charge transport layer coating that is more durable and wear resistant. Imaging cylinders on NEXPRESS presses receive an image via LED exposure on their charged surface. This surface attracts the dry ink to it and transfers it to a blanket cylinder before transferring onto the substrate to be printed. This technology bolsters the ability of the press to print for longer print runs while maintaining

high quality and consistency and reduces running costs making it more competitive for longer run lengths compared to offset litho or inkjet technologies. The Extended Life Imaging Cylinder is compatible with all NEXPRESS Presses in the field, meaning that even an older press can benefit from the lower running cost that these new cylinders provide. This extends the life of the presses while providing an updated, more cost-effective cylinder.



MGI Meteor Unlimited Colors Digital Press Series

MGI Digital Technology • Melbourne, FL • www.mgiusa.com

The MGI Meteor Unlimited Colors Digital Press Series brings digital post-press foil enhancements, color gamut expansion, and hologram printing to mainstream printers. It offers variable-data foiling at high-volume production speeds and the substrate diversity associated with the MGI Meteor DP series of digital printing presses. Direct mailpieces, business cards, brochures, stationery, invitations, greeting, gift and loyalty cards are the most common applications. Multiple one-inch foil (or optional three-inch) rolls can be used on a single pass to create different effects, such as foil over foil and CMYK overprinting of toner over foil. It eliminates the time, labor, clean-up, and cost associated with traditional foil dies and stamping



methods. It is a completely inline digital foiling solution compatible with hundreds of foil products from most major manufacturers. Additionally, it can run two or three simultaneous metallic foils during the same pass, creating reflective color depositions. It also offers single- and double-pass toner foiling, a foil management optimization system for job planning, prepress materials analysis, cost calculations and ROI, and job quote estimations.

Screen Truepress Jet L350UV Label Inkjet Press

Screen Americas • Rolling Meadows, IL • www.screenusa.com

The Truepress Jet L350UV Inkjet Label Press prints up to 164 feet per minute, which gets close to the speed of conventional flexo printing. It overcomes limited speeds and addressable substrates found with toner-based digital label presses. By printing UV inks to commodity grade substrates, it eliminates the need for premium-priced digital grade substrates or the requirement to pre-coat adhesion primer or post-coat for protection. The web digital press offers a variety of capabilities, including a UV inkjet labeling print system composed of digital front end RIP and roll-to-roll print engine. This enables the printing of wide-gamut CMYK and white UV inks to a variety of readily available pressure sensitive

SCREEN

material, film, foil, and paper substrates. It has a short paper path design that includes automatic, touch panel-enabled head cleaning and fewer moving parts than more conventional flexo presses or digital platforms. By combining high image resolution, advanced inkjet printhead technology, and white ink abilities, it can print food and beverage labels, industrial durable and safety labels, point-of-purchase labels, and pharmaceutical and nutraceutical labels among other applications.

Xerox Brenva HD Production Inkjet Press

Xerox Corporation • Webster, NY • www.xerox.com

The Xerox Brenva HD Production Inkjet Press combines the cost saving of inkjet with the flexibility of a cut sheet. It blends cut-sheet components to create reliability with shuttle-vacuum fed sheet feed modules, dynamic belt steering paper transports, and the Xerox FreeFlow Digital Front End. It prints as many as 197 images per minute on many types of paper stocks including uncoated, untreated, and uncoated inkjet treated paper. The automated closed-loop controls correct printhead alignment throughout each print run and its four drop sizes help keep costs low when making paper stock decisions. It allows for flexibility with choices between pre-defined destination or custom profiles. Additionally, it includes complete

xerox



color management features, including object-oriented color management. This enables the press to determine the difference between text, graphics, and images and renders each appropriately while also offering spot color Pantone processing. This approach allows for the more precise printing of fine lines, better defined tints, and natural gradients that past inkjet devices could not provide. The Brenva Inkjet Press enables short runs with high quality and quick turnarounds.



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Those who attend will receive an OSHA compliance information package complete with written program templates, PIA's popular *OSHA Primer* publication, and other valuable resources.

Space is limited! Only the first 20 people to register will be accepted to the program!

October 11 8:00 a.m.–4:15 p.m.
October 12 8:00 a.m.–2:45 p.m.
Warrendale, PA

Member Price: **\$397.00**

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- Gain an understanding of key OSHA regulations.
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Learn more at www.printing.org/OSHAWorkshop.



In 2017



Inkjet is the dominant print technology.



Investment in digital inkjet is a top priority.

By 2019

inkjet is estimated to



Make up 58% of all digital color production volume.



Produce 220 billion impressions in the U.S.

PRODUCE MORE, QUICKER, AND FOR LESS COST

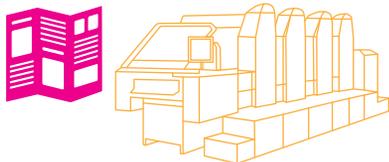
REDUCE

- Pre-printed statements, invoicing, and save warehouse space
- Offset shell production
- Costs 3 to 6 times less over digital toner machines depending on equipment and run length



PRODUCE

- Just-in-time and right-sized jobs that combat shorter lead times and lower volume runs
- High ink coverage applications like color books, brochures, magazines, and personalized catalogs*



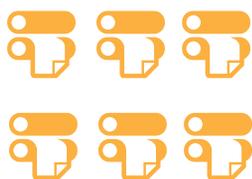
10x VOLUME



20x FASTER

REPLACE

- Multiple offset printers and increase production speed by 30%
- Consolidate existing monochromatic and color applications on one machine



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*Statistic relates to functional printers only. Average of 22% inkjet investment if including commercial, publishing, and packaging printers.

*Consult your press manufacturer for more information.

POSSIBILITIES IN PERSONALIZATION



Think accessing and applying data is essential to marketing success



Anticipate the amount of direct mail to increase or stay flat



Interested in targeted messaging

ASSESSING THE INVESTMENT

\$70,235

additional investment in planning, integration, and marketing



\$175,623
gains from annual turnover



\$63
additional annual profit



Key Considerations:

- Take stock of your existing fleet
- Define your short term and long term goals
- Determine added growth opportunities and benefits
- Get customer buy-in for the new technology
- Consider a phased approach to implementation

YOUR FUTURE WORKFORCE

Nearly 40% of future projected page volume will be derived from applications that do not exist today.

Key expertise will need to include:

- Data Management
- Marketing Analytics
- Customer Strategy Implementation



Sources:

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