

RR Donnelley Plant in Menasha, Wisconsin, USA

InkZone Instrument Flight® by System Brunner

Company Profile

RR Donnelley (Nasdaq:RRD) a global provider of integrated communications works collaboratively with more than 60,000 customers worldwide to develop customized communications solutions that reduce cost, increase productivity, enhance ROI and increase compliance. Drawing on a range of proprietary and commercially available digital and conventional technologies, RR Donnelley provides premedia, printing, logistics and business process outsourcing services to clients in virtually every private and public sector.

The RR Donnelley printing facility in Menasha, WI is G7 certified and employs approximately 400 people. With unmatched manufacturing capabilities and the latest technology, RR Donnelley produces accurate, RR Donnelley Plant in Menasha Wisconsin high-quality, color printed materials including POP printing, corporate collateral, annual reports, books, business forms, catalogues, direct mail, packaging, labels, magazines, etc.

Technical Situation

Eight web presses and one sheetfed Komori 40" press anchor the RR Donnelley plant in Menasha, WI. RR Donnelley is an existing customer of Digital Information's InkZone Ink-Presets and Closed Loop technology, having invested in the solution for their sheetfed press, along with the X-Rite IntelliTrax scanning instrumentation, a few years ago through CMYK Distributors. As an existing customer, RR Donnelley understands the value that InkZone brings to the pressroom in terms of automation, reducing waste, and increasing productivity. Featuring the ability to monitor trends and track job history, utilization of a rollback feature to revert ink key positioning, and the creation of ink key preset linearization curves based on measurement data, running InkZone on their sheetfed Komori 40" press enables RR Donnelley to realize substantially shorter makeready time and a remarkable reduction in paper waste, paired with considerably-improved color quality.



RR Donnelley Plant in Menasha, Wisconsin



(L to R) Randy Docta, 2nd press operator; Toralph Franz, System Brunner; Shawn Buelow, 1st press operator



Kirk Schmidt, RR Donnelley Technical Specialist

While they were extremely satisfied with the InkZone solution, the leadership team at RR Donnelley in Menasha, WI was interested in taking comprehensive quality color control to the next level and CMYK Distributors was there to deliver the solution. CMYK Distributors introduced RR Donnelley to InkZone Instrument Flight[®] by System Brunner for their Komori 40" press. InkZone Instrument Flight[®] by System Brunner is the premium upgraded product solution for InkZone for color verification, process diagnosis, and quality assessment, allowing users to harness the power of the world's leading closed-loop instrumentation with the most sophisticated technology in standardization and printing process verification.

«At RR Donnelley, we are committed to providing our customers with the highest standard of quality and unparalleled service,» said Kirk Schmidt, Technical Specialist with RR Donnelley in Menasha. «By investing in InkZone and InkZone Instrument Flight[®] by System Brunner – technology that has breathed new life into our legacy printing equipment – RR Donnelley is realizing substantial savings in terms of time and materials on a monthly basis. InkZone Instrument Flight[®] by System Brunner is an invaluable tool for troubleshooting the press and helping us maintain our G7 certification.»

Solution

InkZone Instrument Flight[®] by System Brunner brings RR Donnelley color control with the priority on color/gray balance, leading to optimal color consistency with a high

level of automation. The solution safeguards print results in accordance with international standardization concepts (Globalstandard[®], ISO/PSO, etc.) and rates print quality based on System Brunner's 5-Star quality rating system. Moreover, the system permits extensive print process diagnosis in real time that enables problems with the process or materials to be recognized and resolved by RR Donnelley's press crew at an early stage.

Prior to installing InkZone Instrument Flight[®] by System Brunner, RR Donnelley noticed that even when measuring consistent solid densities and LAB values, it was still possible for disturbing color variations to appear in the image during a print run. A number of factors were responsible for these variations including ink; substrate; blanket; fountain solution composition, balance, and conductivity; press settings, etc. These color variations in the image were influenced by tonal value increases, gray balance, the three-color overprint behavior of the inks, trapping, the relationship of the solids to the tonal value, LAB deviations of the inks, etc. InkZone Instrument Flight[®] by System Brunner controls and regulates these technical parameters.

«With InkZone Instrument Flight[®] by System Brunner, RR Donnelley makes great strides in taking color control to a whole new level,» said Kirk Schmidt, Technical Specialist at RR Donnelley in Menasha. «First with InkZone and now with InkZone Instrument Flight[®] by System Brunner, RR Donnelley is poised to keep pace with the international printing industry by employing this cutting edge new technology.»

Offset Büttner GmbH, Westerngrund, Germany

InkZone Instrument Flight®: Efficiency in Color

In the Heart of Europe: Quality, Environmental Sustainability and Economy with InkZone Instrument Flight®. The recent admittance of Croatia into the European Union has shifted its geographical center to the German country town of Westerngrund, in the district of Aschaffenburg, at the northwestern corner of Bavaria. Defined by the «Institut de Geographie» of Paris, the location has been officially confirmed by the Bavarian Agency for Surveying and Geoinformation.

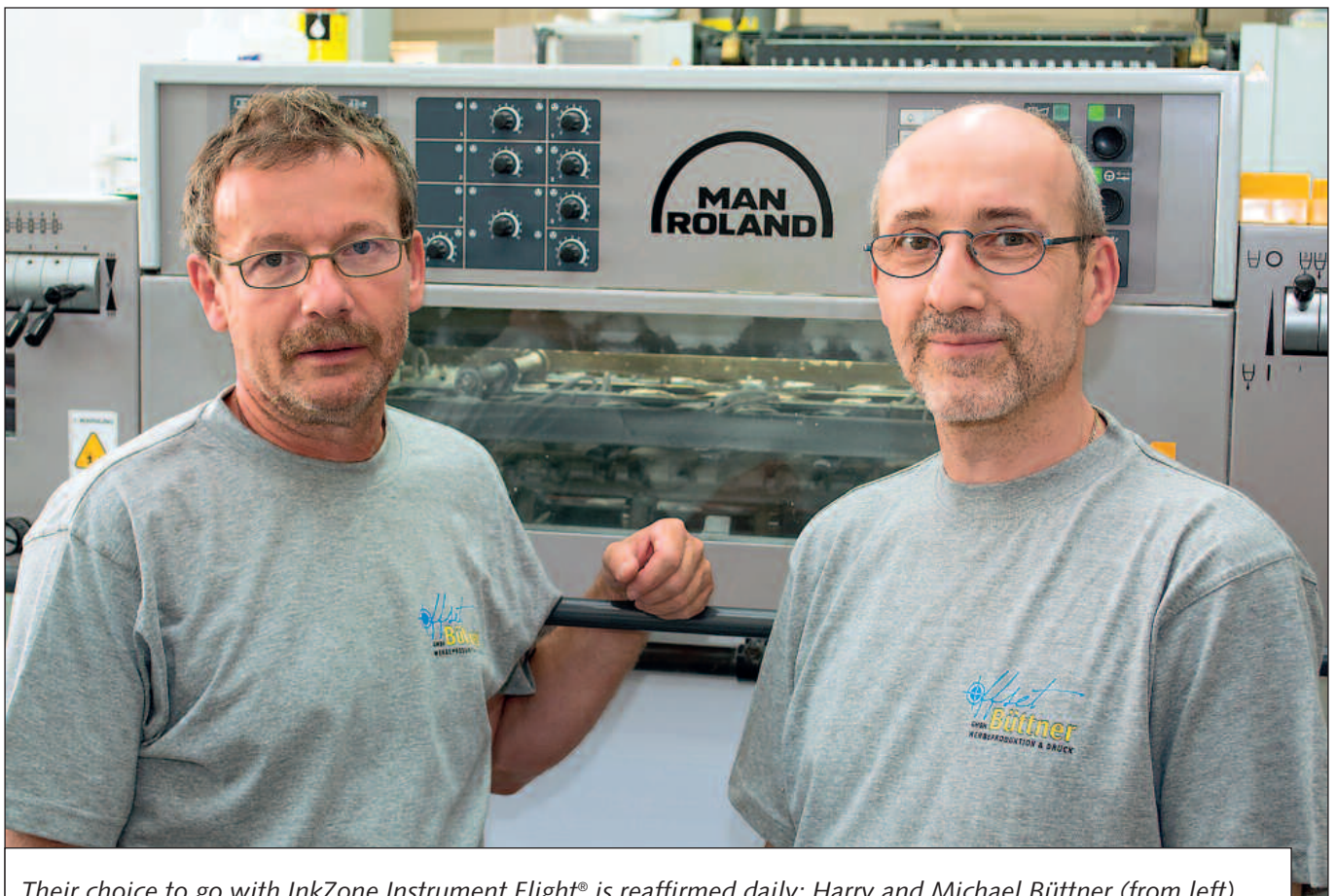
52 Years of Progress

In the more than half-century since Herbert Büttner founded Offset Büttner GmbH, the company has grown exponentially from a small copy shop to a commercial printing plant committed to delivering the highest quality printed materials and featuring the latest technology. Located in the small Franconian country town of Westerngrund, Offset Büttner GmbH is an important mainstay in the local business community.

After growing and refining Offset Büttner GmbH for more than 30 years, Herbert Büttner passed the torch to his sons, Harry and Michael Büttner, who have been capably running the family business since 1993. Honoring the standard of excellence set by their father, Harry and Michael Büttner have taken the company to new heights, positioning Offset Büttner GmbH as the industry's premier innovation partner for print and media services. In addition to local advertising agencies and direct print customers, Offset Büttner GmbH's reach extends beyond regional boundaries, encompassing the entire federal state of Bavaria, and serving well-known companies in industries including medical goods, organic food delivery services, tourism, etc.

Commitment to Environmental Sustainability

Offset Büttner GmbH is committed to investing in technology that enhances the efficiency and cost-effectiveness of their business, as well as minimizes their environmental



Their choice to go with InkZone Instrument Flight® is reaffirmed daily: Harry and Michael Büttner (from left).



At a large-size monitor, Michael Büttner monitors all of the parameters of safe color control.

Michael Büttner. «InkZone Instrument Flight® is exactly what we were looking for. It is a multi-channel solution that takes into account the L*a*b* values, dot gain, and the gray balances in the midtones and shadows – according to control priority chosen. InkZone Instrument Flight® gives us the tools we need to achieve optimal comprehensive industry standards.»

High color consistency during the print run

Offset Büttner GmbH uses different control priorities depending on the requirements of each print job (density balance in the solids, ISO/PSO, or gray balance). InkZone Instrument Flight® safeguards the print results in accordance with international stan-

footprint. Under Harry and Michael Büttner's leadership, Offset Büttner GmbH has become a best practice model for environmental protection and stewardship in the printing industry. For plate imaging, Offset Büttner GmbH uses chemistry-free materials in which the moistening solution has an alcohol content of zero percent. In addition, they print with mineral oil-free inks and their paper supply originates from sustainably managed forests. They also use «green» energy to power their facility.

Why InkZone Instrument Flight®?

Advancing the company's overall strategy and commitment to technology and solutions that promote sustainability, Offset Büttner GmbH recently investigated and selected a new ink preset and color control system for their sheetfed offset printing press. The company sought a solution that would enable them to reach target color values quickly, thereby reducing paper waste and makeready time.

Upon learning that Offset Büttner GmbH was evaluating this type of technology, their graphic products supplier, Heinrich Baumann Grafisches Centrum, introduced Harry and Michael Büttner to InkZone Instrument Flight®, the world's leading universal solution for color control developed in partnership by Digital Information and System Brunner.

«We wanted a system that measures not just the densities in the solids, but also considers how screened halftones and color balance influence the settings,» said

standardization concepts (Globalstandard®, ISO/PSO, worldwide standards) and rates print quality based on System Brunner's 5-Star quality rating system. Moreover, the system permits extensive print process diagnosis in real time that enables problems with the process or materials to be recognized and resolved at an early stage. Or, as Michael Büttner put it, «One sheet is like the others.»

Harry Büttner expressed his satisfaction with InkZone Instrument Flight® and noted the fact that the presetting system does not necessarily require CIP3 data transmission from prepress. It is capable of optimizing the preset calibration from saved press data. «InkZone Instrument Flight's® simple and straightforward user interface – especially the concept of working with “image zones,” – has enabled our team to get up to speed quickly and to harness the color verification, process diagnosis, and quality assessment capabilities of InkZone Instrument Flight,» explained Harry Büttner. «We are very pleased with the comfortable way that color casts can deliberately be set. The fact that color balance is regulated not only by solid density but also by several other variables took some getting used to. But it was extremely helpful in getting a better understanding of how the solids and dot gain depend on each other.»

InkZone Instrument Flight® contributes to a higher awareness of quality, indicated by the fact that more and more proofs are produced in order to define the target point visually. «During the production run, we are able to

reach the required standards without any problem and we can also adhere to them,» confirms Michael Büttner. «In this context, I would like to highlight that InkZone Instrument Flight® is capable of maintaining the visual appearance alongside the sheet margins in case the densities change (e.g. unstable ink/water balance).»

Thanks to InkZone Instrument Flight®, Offset Büttner GmbH has gained considerably better control over the offset process. «This is of particular importance when working without alcohol in the moistening solution because the ink/water equilibrium tends to lose stability/balance more quickly» says Michael Büttner.

Important component: the PrintCurve Checker

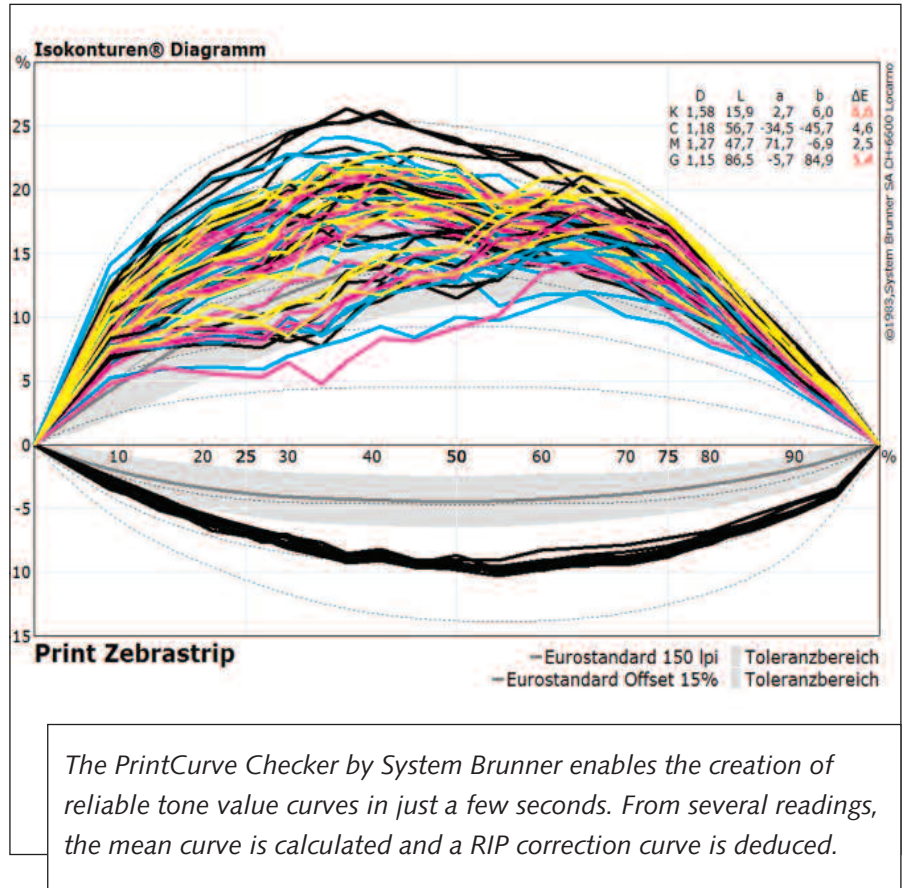
Further enhancing the functionality and success of their installation of

InkZone Instrument Flight®, Offset Büttner GmbH took the recommendation of Digital Information’s German distributor, go4color, and added PrintCurve Checker by System Brunner to their overall solution. The PrintCurve Checker measuring system integrates Techkon’s SpectroDrive scanning device to collect the measuring data within seconds. The Software calculates the mean Tone Value curve from several readings, from which the RIP correction curve for each color is then extracted. Printing characteristics are produced within seconds and measurements are curves across the entire print run. With these checks, process variations can be detected which may occasionally occur due to the materials used.

For example, thanks to the PrintCurve Checker, Offset Büttner GmbH recently discovered that their printing plates were prematurely wearing during long print runs and were able to resolve this problem, saving time, money, and resources. «Without the tools we now have with our comprehensive InkZone Instrument Flight® solution, we would never have been able to monitor such fluctuations or to resolve issues so expeditiously,» said Michael Büttner.

Objective achieved

The Büttner brothers and their team at Offset Büttner GmbH are very pleased with the InkZone Instrument Flight® solu-



tion. Thanks to an initial introduction from Heinrich Baumann Grafisches Centrum and further recommendations, support, and professional assistance from the team at go4color and System Brunner, Offset Büttner GmbH is now a best practice InkZone Instrument Flight® operation, equipped to handle color control far more consciously. «We are delighted with our decision to install the InkZone Instrument Flight® solution on our offset press. The quality of the support that we get is incomparable and the value and wisdom of the decision to go with InkZone Instrument Flight® is reinforced daily by the quality of our work and the measurable savings we are seeing in terms of our resources and time,» said the Büttner brothers.

Key benefits of InkZone Instrument Flight by System Brunner include:

- Optimal color consistency
- Better harmony between human color perception and control software:
- The most comprehensive industry standards
- Quality rating with the System Brunner 5-Star Score
- The most comprehensive printing process diagnosis
- Permanent training tool, optimized communication between the prepress and printing operations

The Princely Printers: Gutenberg Ltd., Schaan *World Premiere and World Record with InkZone Instrument Flight®*

Recently, Gutenberg Ltd. at Schaan (Principality of Liechtenstein) partnered with Switzerland-based powerhouses Digital Information and System Brunner to become the world's first printing company to install the all new InkZone Instrument Flightcolor control software on the control center of their Heidelberg Speedmaster® SM 74-5-P. By joining System Brunner's leading Instrument Flight Gray Balance color control software with Digital Information's InkZone ink-presets and closed-loop product line, InkZone Instrument Flight by System Brunner allows users to harness the power of the world's leading closed-loop instrumentation with the most sophisticated technology in color control, standardization and printing process verification. Since installing InkZone Instrument Flight, Gutenberg Ltd.'s productivity has increased exponentially, exceeding company expectations — and breaking world records.

The Story Begins with InkZone Loop

Gutenberg Ltd. at Schaan (Principality of Liechtenstein) is a true pioneer in the printing industry. Whenever a new product promises to add value and increase productivity, the Gutenberg Ltd. team is ready to take a step ahead of the curve. Four years ago, Gutenberg Ltd. invested in Digital Information's InkZone ink-preset and closed loop technology to bring their then 6 year old legacy Speedmaster SM 74-5-P press up-to-date with the latest technical level of color control. Equipping their 5-color press with the fast, motor-driven SpectroDrive scanning measurement tool by Techkon and the InkZone ink-preset and closed-loop software, Gutenberg Ltd. was able to considerably decrease set-up time and waste production. According to Remi Nescher, Director of Gutenberg Ltd. at Schaan, the gains in quality and the cost reduction witnessed with InkZone were remarkable.

Moving Forward

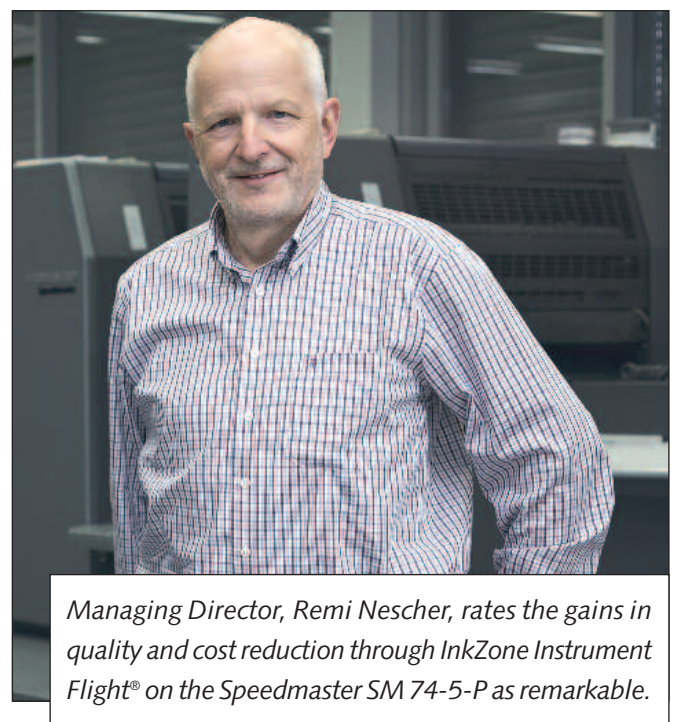
Four years later, the sheet-fed, offset press from Heidelberg was still mechanically flawless, but ready for the next step in its evolution to remain competitive with the latest printing technology. When Digital Information and System Brunner announced their strategic alliance and introduced InkZone Instrument Flight, Remi Nescher and Gutenberg Ltd. Production Manager, Fabio Wellenzohn knew they were ready to harness the power of the world's leading closed-loop instrumentation with the most sophisticated technology

in Gray Balance control, standardization and printing process verification for their Speedmaster SM 74-5-P. Remaining true to Gutenberg Ltd.'s pioneering spirit, their Speedmaster SM 74-5-P became the world's first Heidelberg printing press to be equipped with the InkZone Instrument Flight solution after a short testing period of just a few months.

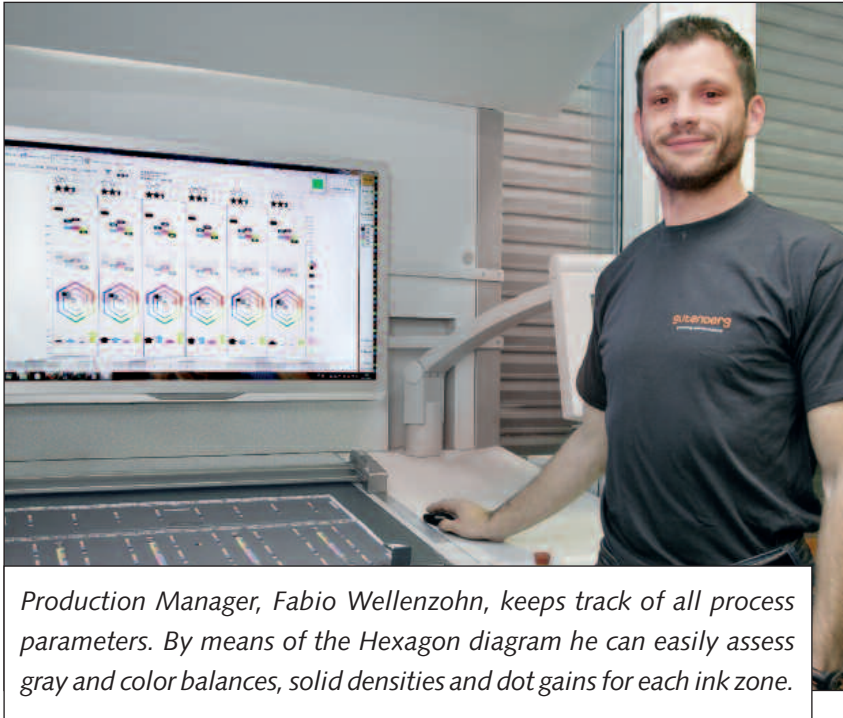
InkZone ink-preset and closed loop technology remains the framework for this new system. The DI-Plot software transcribes bitmap files generated by the prepress workflow into ink coverage values and feeds them as JDF files to the InkZone Perfect presetting software. The initial key values are then transmitted to the CP2000® control console where they are constantly re-calculated by InkZone Instrument Flight during the print run. From this point, InkZone Loop takes over the operation.

The Process Viewed as a Whole

Until the installation of InkZone Instrument Flight, Gutenberg Ltd. was conducting color control according to the densities in the solids. However, many of the variables that can affect the quality of a printed product were being ignored. With InkZone Instrument Flight, they are now able to take automatically into account an entire range of additional factors, which are essential to maintaining stable color consistency within narrow limits including: dot gain and mid-tone



Managing Director, Remi Nescher, rates the gains in quality and cost reduction through InkZone Instrument Flight® on the Speedmaster SM 74-5-P as remarkable.



Production Manager, Fabio Wellenzohn, keeps track of all process parameters. By means of the Hexagon diagram he can easily assess gray and color balances, solid densities and dot gains for each ink zone.

form. In addition to giving priority to the gray balance, to ISO 12647-2 (PSO) or to worldwide specifications, it is also possible to lay the main focus on GCR/Gray Stabilization – in other words, stabilizing the image gray balance through achromatic structures – or on optimizing the reproduction of printing forms that are dominated by solid areas. Balancing with priority to the solids is useful if the customer requires corporate colors consisting of solids or homogenous technical screens to be precisely maintained – especially in the package printing arena.

Five-Star-Assessment with Psychological Momentum

Employing InkZone Instrument Flight technology results in considerable cost savings.

spread, gray balance in the overprint of the three chromatic colors Cyan, Magenta and Yellow (CMY); color balance of the primary colors CMY in mid-tones (50%) and solids (100%); trapping of the three chromatic colors CMY in the solids (100%); and color balance in the solids according to the $L^*a^*b^*$ standard (best match).

The multi-dimensional color control performed by InkZone Instrument Flight handles the full spectrum of process dynamics in offset printing. The heart of the application is innovative and sophisticated software that is the result of more than thirty years of practical experience. InkZone Instrument Flight maintains control by continually taking into account the extent to which the deviation of one parameter influences all of the others. For example, the tendency towards a drift in the reds can be compensated for by either reducing the densities in Magenta and Yellow or by increasing the amount of Cyan. But, before InkZone Instrument Flight implements such a correction, the system considers other parameters such as dot gain and color and gray balances. The analysis encompasses all of the interactions among the four process colors CMYK with their differing tonal values and their overprint as halftone dots. This procedure ensures that for every adjustment and each ink zone, the best possible setting is found and executed in line with the pressman's color perception.

InkZone Instrument Flight provides a variety of adjustment priorities for differing process balancing situations. The pressman can choose them according to the printing

Set-up times are reduced, print results remain within closely defined standards, color consistency is brought to perfection, and the solution lends to quick and early problem detection resulting in print run security that no other system can match.

«As far as set-up times and waste reduction are concerned, we had already achieved substantial improvements four years ago by installing InkZone,» said Fabio Wellenzohn. «With InkZone Instrument Flight, once again, we have been able to markedly increase the stability of color control. By taking into account all of the additional parameters covered by this new technology, we can now print with far less process fluctuations compared with the past, when we could only control the densities. Mastering this process has definitely led to significant growth in performance, as well as further cost reductions in terms of set-up time.»

The increased process stability is also due to InkZone Instrument Flight's high degree of user-friendliness. Across the entire width of the sheet, the pressman can easily judge color control independently for each ink zone by checking the Hexagon diagram. At a glance, the pressman can see where the values related to solid densities, dot gain, color balance of the primaries (mid-tones and solids), gray balance and overprint (trapping) are positioned.

«For each ink key, the system proposes a setting and indicates through arrow icons if the respective ink keys should be widened or narrowed,» explains Fabio Wellenzohn. «The five-star system adds tremendous value and lends to the ease of use for pressmen. The stars represent how well

InkZone Instrument Flight Lands in the Guinness Book of World Records

Gutenberg Ltd. is a world leader in the book printing industry. Demonstrating Gutenberg Ltd.'s commitment to quality, in 2010 two photographic books that were printed by Gutenberg Ltd. were awarded a prize for «Liechtenstein's Most Beautiful Books.» Gutenberg's passion for aesthetics in book production also extends to their printing of postage stamps. They predominantly produce commemorative stamps in smaller editions and partly in polygonal shape by order of the Post of Liechtenstein, Swiss Post, as well as some other European postal enterprises. For perforating the stamp sheets, Gutenberg Ltd. invested in a specialized punching machine just for that purpose.

In August 2012 Gutenberg Ltd. and Philately Lichtenstein joined together to set a Guinness World Record. In celebration of the 100-year jubilee of the Principality of Liechtenstein's first postal stamp edition, a commemorative stamp was produced. The entire operation was completed in just 57 minutes and 50 seconds, beginning with the announcement of the motif which was chosen from three proposed designs and ending with the purchase of the first stamp by Craig Glenday, Editor-In-Chief of the Guinness Book of World Records, at the LIBA 2012 at Schaan, the special stamp exhibition held to celebrate the 100-year anniversary. «The prior world record for Fastest Printing of a Postage Stamp was held by Austria with a time of 1 hour and 25 minutes. With InkZone Instrument Flight in our corner, we were able to blow that record out of the water and to secure a place in this year's Guinness Book of World Records. We could not be more excited about the addition of InkZone Instrument Flight to our



By producing a commemorative stamp in just 57 minutes and 50 seconds, Gutenberg Ltd. and Philately Lichtenstein achieved an entry in the Guinness Book of Records. Tanja Vetsch of Gutenberg Ltd. proudly presents the certificate.

technology arsenal or about sharing the honor of being a Guinness world record holder with Philately Lichtenstein,» said Remi Nescher.

the system is adhering to the printing standard. Visual assessment boosts printing quality, for it is the goal of any professional pressman to achieve the highest possible star rating.»

Process Calibration by Print Expert®

In order to base the printing process on a known reference, it is critical that the plate-setter is reliably calibrated. For that task, Gutenberg Ltd. uses Plate Checker from System Brunner's Print Expert Suite. By means of a scanning measurement instrument, the software can capture 20 tonal values of the Plate ZebraStrip® in just one go. The measurements can then be compared with the stored reference curves and the results can be represented as an Isocontour® diagram.

Gutenberg Ltd. also works with PrintCurve Checker for long-term quality maintenance of the printing process (control of the characteristic curves). The identical instrument for plate calibration is used for measuring. In just one scan PrintCurve Checker detects four tonal value curves (CMYK), each representing 20 screen densities. The internal interface that connects PrintCurve Checker with Plate Checker allows for the adjustment of the calibration curves of the plate-

setter's RIP. «The Print Expert Suite's software tools assist us in keeping the production process under control system-wide,» said Remi Nescher.

Highest Quality Meets Cost Effectiveness

The value of InkZone Instrument Flight at Gutenberg Ltd. extends beyond the technical improvement of their printing process. In fact, InkZone Instrument Flight is credited with improving internal communication between departments. According to Fabio Wellenzohn, «It is fascinating to work with InkZone Instrument Flight. The high-quality information the system provides us with invites us to look far deeper into the processes. The system lets us indicate precisely where possible deviations reside. According to the measuring results, we can analyze in great detail to what extent the print result remains within defined tolerances and correspondingly where we should interfere before a problem arises. That is where we can also save time and costs. Our prepress department and pressroom staff share the goal of achieving the highest degree of excellence in quality and cost-effectiveness. With InkZone Instrument Flight we are well-equipped to do so.»

InkZone Fountain for Ast & Fischer Ltd., Bern, Switzerland

InkZone Fountain: The Clear Choice

Ast & Fischer Ltd. is committed to superior performance and precision. To help achieve the level of excellence that their customers expect, Ast & Fischer Ltd. became the first European company to install InkZone Fountain. With IZ Fountain, Ast & Fischer Ltd. realized remarkable gains in the stability and security of their print production process.

First installation in Europe

InkZone Fountain is an innovative four-step fountain solution filtration system designed to purify the fountain solution of sheet-fed presses by any manufacturer. InkZone Fountain is manufactured by Swiss company Digital Information and is distributed in Switzerland through Digistuff Ltd. in Zurich.

Recently, Ast & Fischer Ltd. at Wabern (on the outskirts of Bern) became the first European company to install InkZone Fountain. Ast & Fischer Ltd.'s offset division has two sheet-fed, KBA Rapida 106 presses which were put into operation in 2008 and 2010. Both presses run without alcohol in their fountain solution. At the beginning of 2013, InkZone Fountain was installed into the fountain tank of the newer of the two presses.

Quality and efficiency

Ast & Fischer Ltd. chose to install InkZone Fountain because they were dissatisfied with the performance of their original fountain solution filtering system. Calcium, paper dust, fillers, coatings, and other residue from paper were not being filtered out sufficiently and were causing ongoing, severe contamination of their fountain solution. The result was consistently unstable print runs as the ink/water balance

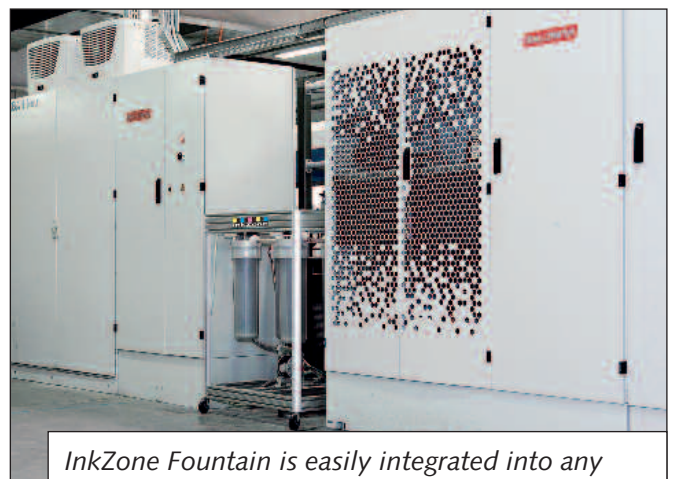
was extremely difficult to maintain. The amount of fountain solution on the printing plates was reaching unacceptable limits leading to drying problems and delays in further processing, which in turn put delivery deadlines at risk. Only by changing the fountain solution several times per week could the print product's quality standards be met. These frequent press downtimes significantly reduced productivity.

Clean water within three hours

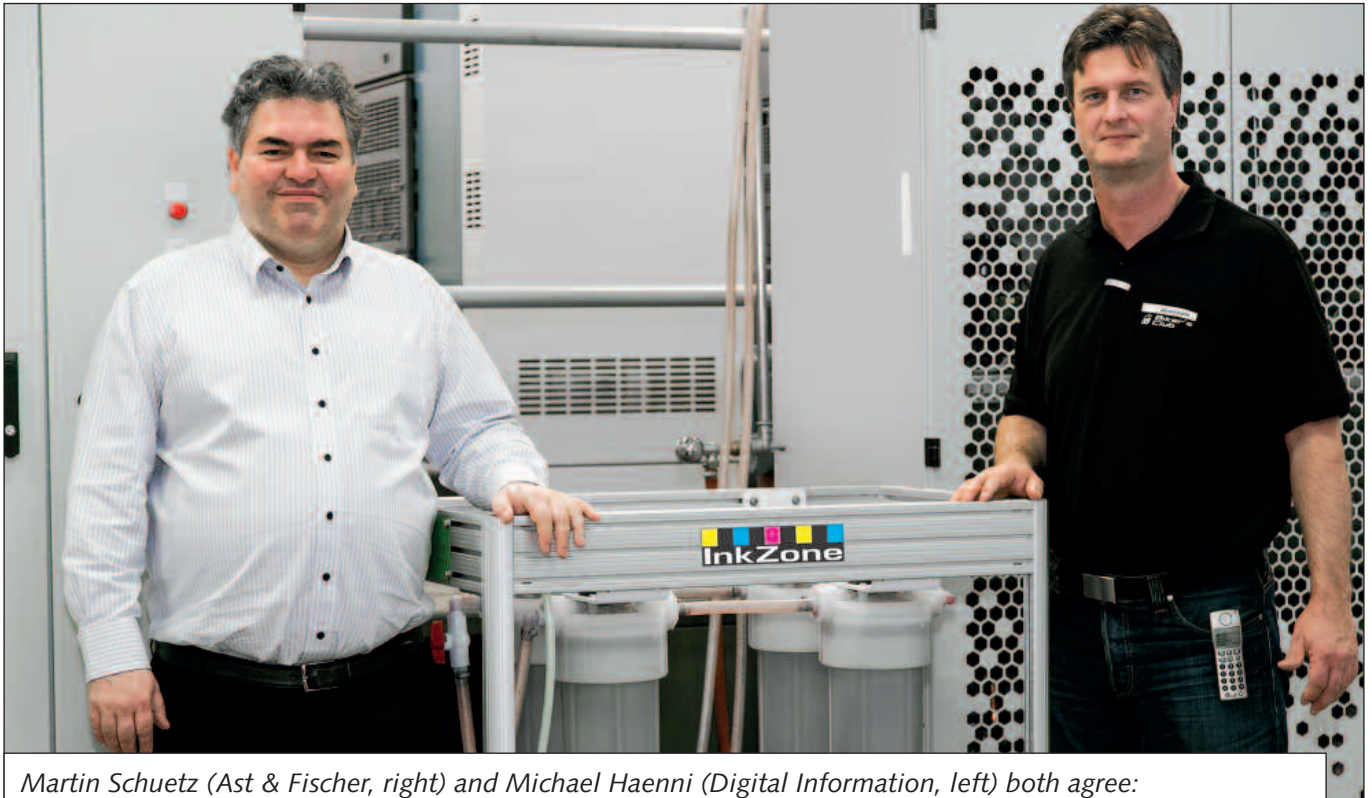
The InkZone Fountain Filtration Solution was installed at Ast & Fischer Ltd. in just two hours without interruption to the print run. Their fountain solution filtration situation improved within only three hours after putting InkZone Fountain to work. Samples taken became visibly clearer by the hour. By the third hour, the water in the tank was completely clear without evidence of any contaminating particulates. «Almost immediately, we were able to realize a decrease in our consumption of fountain solution, our ink drying was accelerated, and the entire printing process became considerably more stable with InkZone Fountain,» said Martin Schuetz, Head of Printing & Post-Press Processing for Ast & Fischer Ltd. «We are also pleased that



Efficient production with InkZone Fountain: One of Ast & Fischer's two KBA 106 at Bern.



InkZone Fountain is easily integrated into any offset press' periphery.



Martin Schuetz (Ast & Fischer, right) and Michael Haenni (Digital Information, left) both agree: InkZone Fountain stands the test on a daily basis.

the InkZone Fountain filtration system was able to eliminate the unpleasant odors associated with dirty tank water. Since installing InkZone Fountain three months ago, we have not had to change our tank water».

While Mr. Schuetz notes that it is too early, yet, to comment on the effectiveness of InkZone Fountain in being

able to extend the time between changes of tank water to up to one year or more, Ast & Fischer Ltd. is very pleased with the increased reliability of their printing process, to date.

ROI within six months

With InkZone Fountain, fountain solution circulates through a four-step filtration system. Utilizing the same powerful, advanced nanofiber technology used in medical technology featuring ceramic nanofibers on a micro-glass matrix, InkZone Fountain filters are graduated in fineness to retain dirt particles down to 2 nanometers.

InkZone Fountain's easy-to-read Smart Gauge indicators refer operators to the degree of filter contamination. The intervals between filter changes depend on the degree of printing press use, as well as on shift operation. «When making the decision to equip our first Rapida 106 with InkZone Fountain, we were very impressed with the system's purification efficiency and with the promised gains in productivity through improved stability and security of the production process. This played a crucial role in our decision,» said Mr. Schuetz. «With a return on our investment on the horizon at the six month mark, we are already preparing to upgrade our second KBA Rapida with InkZone Fountain.»



Easy-to-read information on filter condition via green/yellow/red indicator.

Coburn, Inc. Hayesville, Ohio, USA Gets in the Zone with InkZone

For over 40 years, Coburn, Inc. has been a leading manufacturer of folding cartons, blister packs and point-of-purchase displays.

Coburn, Inc. is a large format facility with the flexibility and technology to provide superb service and quality at a competitive price. In fact, their award-winning products and services have been utilized by thousands of clients, including many Fortune 500 companies.

Technical situation

Two Nebiola presses and one Miller press anchor Coburn's printing department. Their ability to print five colors plus coating (front side) as well as one-color backside affords the versatility to meet a wide range of printing needs. However, upon a recent audit of their printing equipment, the Coburn management team recognized the challenge of keeping pace with their competitors who are operating newer equipment. Coburn's presses are late 1980's/early 1990's models, which are run around the clock, 4-5 days per week.

While, Coburn, Inc. had the technology and equipment to provide excellent quality, timely order fulfillment and unparalleled service to its customers, their legacy printing equipment was still lacking the latest press features like ink-key presetting and closed-loop technology. The management team at Coburn, Inc. knew that these advanced features could save the company thousands of dollars in time and materials on a monthly basis by speeding up makeready time. They also knew that the finished product would be a better quality printed carton. They needed to find a solution



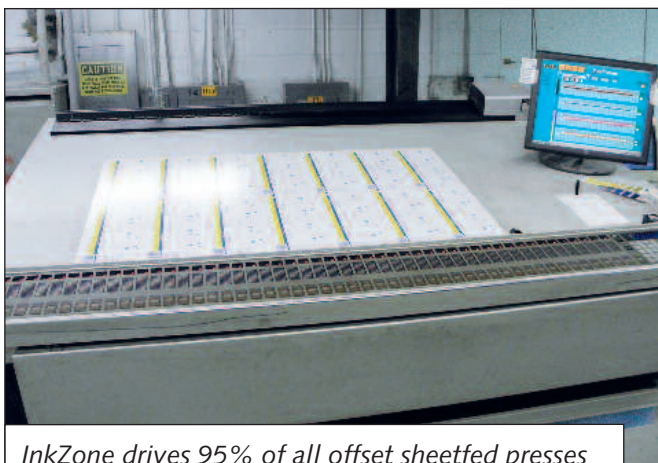
High-quality packaging made by Coburn, Inc.

that would offer the latest technology advantages without the cost associated with purchasing newer presses.

Solution

Upon recommendation from a dealer, Coburn, Inc. contacted CMYK Distributors, Inc. and they were introduced to Swiss manufacturer Digital Information's InkZone product line. CMYK Distributors, Inc. is the exclusive distributor of Digital Information products in the United States and the leading distributor and installer of graphics and printing products that bring automation and waste reduction technology to the industry.

Based on Coburn's workflow needs and pressroom configuration, DI-Plot, InkZone Perfect and InkZone Loop were added to their two Nebiola presses, which are attached to X-Rite IntelliTrax scanners.



InkZone drives 95% of all offset sheetfed presses installed.



Fast and reliable color scanning with X-Rite's IntelliTrax.



InkZone upgrade on top of the console.

«The InkZone product line has been an excellent investment for Coburn, Inc. With InkZone, we have significantly and measurably reduced start-up time and make-ready waste. It is definitely a key solution for any pressroom interested in saving time, money, and contributing to the sustainability of our environment.»

Todd Zimmerman, President, Coburn, Inc.

Benefits

Coburn, Inc. immediately began realizing the benefits of InkZone. In only three months, they have seen a 30% decrease in virgin paper waste from 500 sheets to 350 sheets and they have consistently reduced makeready time up to 20%. The combination of the ink presets and closed-loop technology are proving to be an enormous asset to the company in helping to refine and train in their pressroom. This winning solution is helping the Coburn, Inc. pressroom team to «kick it up a notch» in their understanding and application of densitometry and spectral data.

With InkZone Loop, Coburn Inc. has eliminated the problems of multiple pressmen seeing color differently and discrepancies in the color vision of single pressmen over the course of a shift, as they become increasingly tired.

«InkZone has given us the tools to better troubleshoot printing related problems on press such as pressures and chemistry, as well as increased capacity to measure and monitor the quality of our work and identify areas where additional training is needed.»

Todd Zimmerman, President, Coburn, Inc.

Given the fact that much of Coburn's work is repeat orders, the archiving of presets is extremely useful in keeping their products consistent from one run to the next. For example, there have been jobs since the solution was installed where the color has been adjusted on press by the client. With InkZone, once these changes were made and the job was archived, the Coburn team was able to repeat the saved settings on other products in the same line for better consistency on store shelves.

Print Shop Teo Diebold Ltd. Albstadt, Germany **Color Technology Investment Has Long-term Potential**

The Theo Diebold Ltd. print shop in Germany is a small, family-run printing business. They have made a few recent investments in order to improve the capability of their Speedmaster® SM74-5 press and its associated CP2000® console, and wound up getting more value than owner Wolfram Diebold ever imagined. That's because they have significantly improved their color control process – including presetting of ink keys, closed loop press-side color control, the quality assurance of their recent CtP investment, as well as examination of color proofs – all with one single cost-effective measuring instrument and the incorporation of InkZone from Digital Information.

The strength of a family business

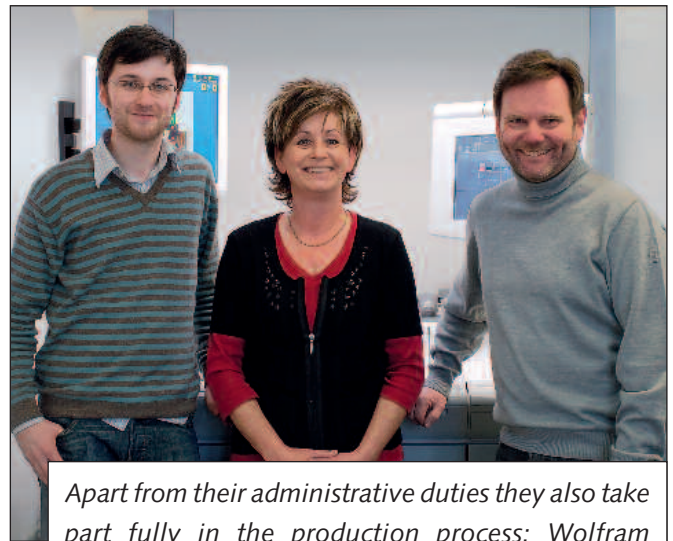
Since its foundation in the early nineteen-sixties, Theo Diebold Ltd. in Albstadt (Germany) has successfully stood their ground in a competitive market environment. Their steady prospering can be attributed to a great extent to a shrewd anti-cyclical investment policy. By meeting deadlines without compromise and executing orders efficiently, even on short notice, the Diebolds have gained the trust of their customers who have honored this by remaining loyal to this business and its staff of eight.

Wolfram Diebold, who took over management of the firm from his father, along with his son Andreas don't talk about quality – they build it in to each and every print job. Their customers can easily assure themselves by a large collection of impressive print samples.

A big color idea starts small

In January 2009, the Diebolds made the changeover from conventional film imagesetting to CtP. Their new plate-setting system uses process-less plates where the non-image emulsion is removed directly on press with the first few impressions. As a result, presetting ink key values can no longer be determined by using a plate scanner because the contrast is far too low, making even visual analysis challenging.

That is why Diebold installed the cost-effective DI-Plot software in pre-press. It transforms the same bitmap used to generate CtP plates into a JDF file of ink-coverage information. Unlike a plate scanner, DI-Plot creates first-generation preset data providing more precision and results in superior color reproduction. Additionally, the JDF (CIP4)



Apart from their administrative duties they also take part fully in the production process: Wolfram Diebold (right) with wife Birgit and son Andreas (at present graduating from the Technical University Wuppertal).

files generated by DI-Plot contain more than ordinary preset values; they can also include parameters for multiple paper types (coated, uncoated, ISO paper classes, etc.), which may require different inking parameters to realize optimum results.

Once created, DI-Plot's JDF file is consumed by Digital Information's InkZone Perfect, which transmits fully-calibrated values for ductor/sweep feed rate and ink keys to the console of the Speedmaster® SM74-5. In the future, Diebold looks forward to the possibility of DI-Plot to also produce 100% content-reliable color-managed proofs using the same the CtP RIP data. All that from a single, reasonable investment.

Bridging the color workflow gap

With ink presetting solved, the Diebolds were also looking at ways to gain more synergy from their Digital Information investment. They had heard about the concept of closed-loop color control, but assumed these systems were expensive and complicated to add to their six-year-old Speedmaster® SM 74-5 with its CP2000 console®.

«We wanted to take the opportunity to optimize the workflow further by closing the color gap and feed measurement data directly into the system,» Wolfram Diebold explains. «We found the ideal, cost-effective solution in Digital Information's InkZone Loop product.»



With the Eye-One® scanner and the InkZone software for visualization and color control, the printing process has been accelerated considerably and the ongoing work is of high quality.

InkZone Loop was installed shortly thereafter. Digital Information's closed-loop system with automatic color bar scanning relies upon X-Rite's economical EyeOne® spectrophotometer. To make the job easier, Diebold opted to add Digital Information's motor-driven, digitally-controlled, four-page-up track system (DC4). Once measured, color values are displayed graphically and numerically on a touch-screen monitor using the choice of density, $L^*a^*b^*$ and dot gain parameters. Target values can be stored in the system by paper type (including Process Standard Offset,



The German print shop Theo Diebold Ltd. produce a variety of high-quality commercial materials on a six-year-old Speedmaster® SM 74-5. Their press console was recently equipped with Digital Information's InkZone system.

ISO 12647-2, etc.) and a color okay sheet can also be saved – from there, deviations are shown in terms of density, dot, Delta-E or gray balance.

Once colors are measured, ink-key settings proposed by the InkZone Loop system can be applied to the press via a symbol on the touch-screen monitor, making the system easy to use while still allowing press operator control.

Operation convincingly simple

After a few weeks of use, Wolfram and Andreas Diebold were convinced they had made a good investment. «With our choice of the cost-effective Eye-One® solution we basically relied on the recommendations of Digital Information and their German distributor Digi-Service Ltd. Our experience so far is that the system works very reliably, and our press operators have a much easier task of delivering quality printed results. In addition, the InkZone solution is a secure investment because it is flexible enough to be used on any new press we acquire, even if it is from another manufacturer» Wolfram Diebold says.

Andreas Diebold, speaking as a former press operator and instructor for one of the leading press manufacturers says «the InkZone interface is so simple and self-explanatory that one of our press operators with limited computer experience easily discovered and started using the system's measurement and control capability. Here, the excellent design of the user interface on the touchscreen helps considerably.»

One measuring device for three applications

With the Eye-One® spectrophotometer Theo Diebold Ltd. has access to further usages without any need to invest in additional measuring equipment. Apart from its capability to measure and control the press, the system can also be extended to an overall solution when the software licenses for InkZone Move Plate and InkZone Move Wedge are activated. On the basis of industry-approved color bars, a single, cost-effective measuring instrument allows for color control in the printing process and ongoing quality management of the platesetter as well as the examination of proofs or sheets from the production run. The concept is in full alignment with the long-term, value-based, business practices Theo Diebold Ltd.

® = CP2000 Center and Speedmaster are registered trademarks of the «Heidelberger Druckmaschinen AG» company. Eye-One is a registered trademark of the «X-Rite Europe GmbH» company.

There are no organizational or commercial links with the «Heidelberger Druckmaschinen AG» or the «X-Rite Europe GmbH» company.

Grafimedia AG, Goldach, Switzerland

Meeting ISO Standards with a Small Capital Expenditure

Grafimedia AG in Goldach has recently obtained Process Standard Offset (PSO) certification for its printing process. And according to the high-quality printer, it was the InkZone Move Press solution from Digital Information that made all the difference.

The All-In-One Package

In opting for the InkZone solution from Digital Information, Grafimedia AG acquired a complete system for working at a consistent printing quality. The key components of their system are: InkZone Perfect for presetting ink keys prior to press makeready; InkZone Loop – a closed-loop color solution which helps maintain on-press results within the tightest of tolerances; and InkZone Move Press for automatic scanning with the affordable X-Rite EyeOne (i1) spectrophotometer. InkZone Move Press has been approved by UGRA, the Swiss standards institute for the graphics industry, as a solution to obtain certification to ISO 12647-2 (sheetfed offset printing). A color bar developed by UGRA is an official part of the InkZone Move package.

Dreaming About PSO Certification

Grafimedia AG has long been aware of the importance of standards as a means not only for promoting internal efficiency, but also for delivering quality to customers and for differentiating their printing services in the marketplace. Although Grafimedia's working practices have always been organized with standards in mind, they were never officially recognized as such. One reason for this is that PSO certification requires the use of a scanning measuring instrument – and for a company of Grafimedia's size, that's a considerable investment, especially considering the large price tag associated with press manufacturer's solutions.

Unbeatable in price and performance

With the recent introduction of InkZone Move Press to the market, however, the situation at Grafimedia changed. The affordability, quality and adapt-

ability of this new solution from Digital Information makes it ideal for this type of situation.

The measuring system relies upon the EyeOne, a commercially available, open-ended and accurate spectrophotometer. On the price/performance side, this measuring device is unequalled. Grafimedia saw the benefits, equipped their Heidelberg Speedmaster SM 52-6 with InkZone Move Press, and also installed the optional DC2 (Digital Control) electrical drive to ensure ease of use and more reproducible measurement results. With this arrangement, the press operator triggers the fully-automatic measurement sequence via a graphical, touch-screen interface.

An Excellent Foundation in Pre-Media

With products from Digital Information, Grafimedia has always been sure of sound and economical investments. Like thousands of others in the printing industry, they have relied upon DI-Plot software to output imposed proofs prior to making plates for the press, in this case via a Harlequin RIP. In terms of workflow, DI-Plot simply sends the zone coverage values as JDF files to InkZone Perfect, which then converts the data into calibrated values for presetting the ink keys and duct rollers on the six-color Heidelberg. So with only a small capital outlay, the full package including DI-Plot, InkZone Perfect, InkZone Loop and InkZone Move Press brings the sheetfed press at Grafimedia AG up to the very latest specification, while also making their operation more efficient.



Contented faces after successful PSO certification (from left): Peter Breu, Grafimedia AG; Roland Gisler, Digistuff AG, Andreas Breu, Grafimedia AG, the printing technician Adela Kujovic; Erwin Widmer, UGRA St. Gallen; Martin Breu, Grafimedia AG.

Theissen Druck GmbH, Monheim am Rhein, Germany

InkZone Loop with measuring technology from Techkon

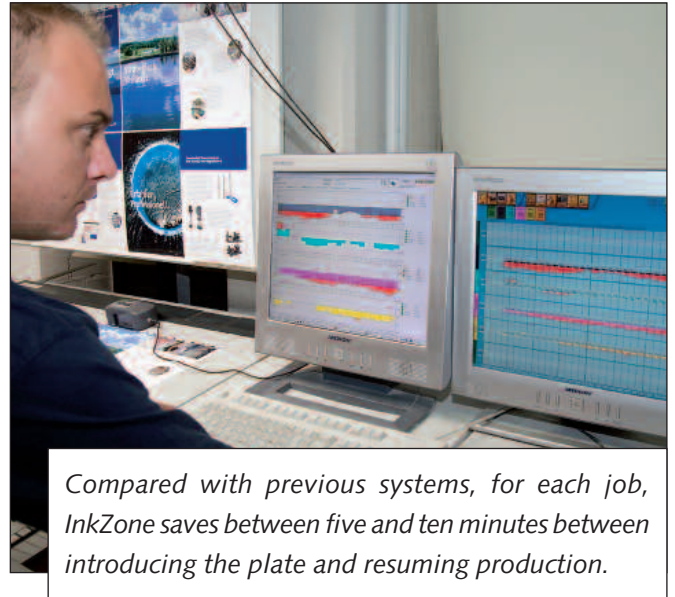
InkZone Loop frees up capacity reserves

At Theissen Druck GmbH, Process Standard Offset (PSO) is the way of life. An indispensable quality assurance tool for this printing process is the Techkon RS-400 with closed loop color control software. Using InkZone Perfect for pre-setting the ink keys and InkZone Loop for color control, the life cycle of the printing presses have been extended at a small fraction of the cost of adding new presses. The presses printed well, they just needed an infusion of technology. The result: press operators embraced the system for the benefits the equipment has brought into the pressroom.

1000 hours saved each year

At Theissen Druck GmbH in Monheim am Rhein, production in 8/up format runs on two Speedmaster SM 102s (with four and six printing units respectively), and in 2/up format on a Speedmaster SM 52. All printing presses are connected online to prepress via InkZone Card and receive the JDF files from the workflow via DI-Plot for precise presetting of the ink zones.

Production is a three-shift operation, with the number of makereadies stated as 6000 to 7000 per year. «Compared with the previous “sneaker-netted” offline presetting system, the InkZone Perfect presetting solution from Digital Information saves us between five and ten additional minutes between introducing the plate information and resuming production», says Thomas Arenz,



Compared with previous systems, for each job, InkZone saves between five and ten minutes between introducing the plate and resuming production.

who as Managing Director is responsible for production. Based on the total number of makereadies, the extra capacity amounts to 1000 hours a year. Theissen Druck receives additional added benefit by being able to modify curves easily at each press for various stocks and inks.

InkZone Loop fills important gaps in the marketplace

«When we decided to make our printing house fit for the PSO certificate, closed loop color control finally became the topic of discussion», says Thomas Arenz. Accordingly, at the end of 2006, Theissen Druck GmbH equipped the CPC consoles on both its approximately eight-year-old printing machines with a Techkon measuring system plus Digital Information's InkZone Loop ink control software. For the measuring procedure, the printer runs the densitometer over the measuring strip manually with the aid of a magnetic rail. A motorized scanning track is also available as an option.

«On the road to more efficient utilisation of capacity and improved quality assurance, InkZone fills an important gap in the marketplace», Thomas Arenz claims. «The really big boost to productivity in the printing process came in the 1990s with automatic plate changes and washers for the blanket and ink fountain/damping rollers and the printing cylinder. Since then, any improvements have tended to be



Theissen Druck GmbH operates the InkZone Loop control system with Techkon measuring technology.

marginal. In contrast, at a comparatively low price, we now have the InkZone solution, which gives a fresh boost to automation and definitely brings us a lot further – from the points of view of efficiency and also achievable stability at a high level of quality.»

Service life extended by three years

Before the installation of InkZone Perfect and InkZone Loop, Theissen Druck GmbH would have been looking at the replacement of a Speedmaster SM 102 by a state-of-the-art printing machine. «Naturally, InkZone presetting and closed loop color control would be part of the overall package with any new investment, but we would have paid an incomparably higher price for it. With the InkZone solutions from Digital Information, we get exactly the same performance, but at a much lower cost», says Thomas Arenz, who points to the efficiency aspect in particular. «Our two Speedmaster SM 102s are now eight years old and have paid for themselves in full. When it comes to printing quality, they are the equal of any new machine. Now, thanks to InkZone Perfect and InkZone Loop, we can run production on the existing technology for at least three more years. Here, we profit from genuine added value.»



Thomas Arenz, Managing Director at Theissen Druck GmbH: «Thanks to the InkZone solutions, we are extending the service life of our eight-year-old printing machines by a further three years.»

LVRI, Corbeil-Essonnes, Paris, France

InkZone Loop with IntelliTrax from X-Rite

Convinced by quality and reliability

Imprimerie LVRI has equipped its KBA Rapida 105 with Ink Zone Loop interfaced with the IntelliTrax scanning system from X-Rite to provide closed loop ink control. In addition, ink preset data for each ink zone is delivered to the press by DI-Plot in conjunction with InkZone Perfect ink preset software. According to the customer, the high data quality means that InkZone gives printers maximum security when operating the system.

State-of-the-art technology behind an old facade

«We think the InkZone solution is a winner.» With this short statement, Fabrice Houillon expresses his enthusiasm for InkZone Perfect and InkZone Loop. Together with his wife Mathilde, he runs Imprimerie LVRI, based in Corbeil-Essonnes to the south of Paris with some 20 employees. Although housed in an old building, this printing company can point to state-of-the-art equipment throughout. In the press room, there is a Rapida 74 with four printing units plus a KBA varnishing unit, and a four-color Rapida 105.

InkZone exceeds expectations

Imprimerie LVRI has been using X-Rite' ATD scanning technology for color control for the last seven years. Adjustment of the ink keys were not interfaced from the X-Rite ATD directly to the ink console. Make-readies were slower and waste was higher than necessary without the benefit of ink key presetting. The systems installed at LVRI

The X-Rite IntelliTrax is one of the fastest scanning systems. The colour-bar on a 105 cm press-sheet is scanned in just 15 seconds.



before either lacked the required precision or were unsatisfactory from an operating point of view. Fabrice Houillon eventually found the solution he was looking for in the form of InkZone Perfect for presetting the ink zones and InkZone Loop for closed-loop ink control. When asked about the reasons behind his enthusiasm for this product, Fabrice Houillon's answer is clear and concise: «The InkZone solution from Digital Information is completely reliable and very easy to operate. Immediately after it was installed, we were able to use the software productively». Fabrice Houillon can also confirm that the system is stable, and that so far there's been no need for support.

Reliability brings high security

The data for the ink zone preset is calculated by DI-Plot on the basis of a bitmap generated in the RIP imaging device. It is sent direct to the printing press console via Ethernet. Fabrice Houillon points to the high data quality in particular. «We can depend on the JDF files. The values create the required print-job color profile with above-average precision. Our press operators have become very confident with the system, and feel secure when using it. With reduced doctor/sweep movement, the ink keys can be opened wide. The result is greater latitude when setting the keys with fine adjustments of the correction options.»



The printers at Imprimerie LVRI rate InkZone Perfect and InkZone Loop as reliable and very easy to use.

Having replaced the ATD with the new IntelliTrax scanner, Imprimerie LVRI also benefits from a high measuring speed. It scans the colour bar on a 105 cm press-sheet in just 15 seconds. InkZone Loop shows the measurement values for each ink unit on the screen's graphic interface. The press operators themselves will decide on the extent to which they should accept the corrections that the system recommends.

Commitment and quality stay the same

The foundations of Imprimerie LVRI were laid in 1954 by Georges Houillon. His brother and son Fabrice joined the company some twenty years later, which from then on operated under the name LVR (Lithographie des Vignes Rouges). The printing operation experienced strong growth in the following decade, and in 1985 LVR became LVR International (LVRI).

In the fifty or so years of its existence, Imprimerie LVRI has kept one thing the same: the fulfilment of high quality demands by a committed and professional team of employees.



Mathilde and Fabrice Houillon are the second generation to run the company, which was founded by father Georges Houillon in 1954.

Stern Druck GmbH, Fügen im Zillertal, Austria

InkZone Loop with EyeOne/i1 measurement device

Efficient closed-loop solution up to 4up format

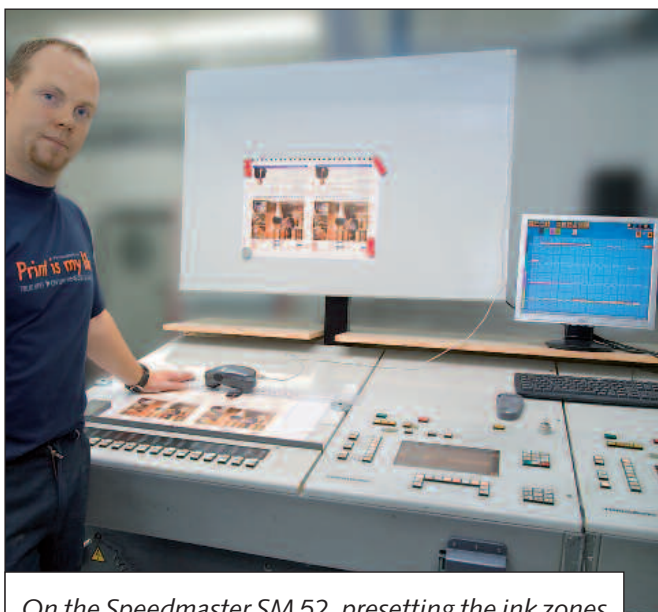
At Stern Druck GmbH, the complete InkZone solution, with ink zone ink presetting and closed loop color control, is being used on a Speedmaster SM 52. The system configuration uses an X-Rite i1 spectrophotometer as the measuring device, for a low-cost, high-performance solution for press sheets up to 29 inches in width.

15 minutes faster per job

Stern Druck GmbH runs its production on a Roland 706 with varnishing unit and a Speedmaster SM 52-6. This press operates from a CPC console and receives the ink zone preset values from DI-Plot through InkZone Perfect via InkZone Card. The DI-Plot proof software was installed seven years ago for generating proofs from a bitmap created by a Harlequin RIP. Since then, the operation has changed over to the Prinergy workflow system with computer-to-plate. DI-Plot has taken on an additional role in the workflow and now also delivers the JDF files for precision ink zone presetting to the Speedmaster SM 52-6.

«We gain about 15 minutes per job when presetting the ink zones», says printing technician Andreas Pfister. With most print runs varying between 2500 and 10,000 printed sheets, much faster makereadies are going to make all the difference.

With Ink Zone Loop color control software, the i1 spectrophotometer from X-Rite is a professional, low-price solution for use on smaller printing presses.



On the Speedmaster SM 52, presetting the ink zones using Ink Zone Card saves about 15 minutes per job.

Simple operation, high process stability

Equipping the press with InkZone Loop was the next logical step. In addition to presetting the ink zones, the closed loop color control software provides press operators practical support and is effective in lightening the load when monitoring quality control thereby improving print reproduction consistency. Connection of the i1 spectrophotometer with the Ink Zone Loop control software results in a professional and low-cost solution, the use of which is fully justified on the Speedmaster SM 52 from the operational efficiency viewpoint.

«InkZone Loop has proven to be a very efficient aid to quality assurance», says Andreas Pfister. «Even with smaller print-runs, we obtain much more stable print results. The user interface is clear and concise. So working with the system is very straightforward. As printers, we get a very secure feeling when monitoring production».

High demands on quality

Stern Druck GmbH has been based in Fügen (Zillertal, Austria) since its foundation by Jörg Höllwarth in 1980. Today, the family-owned company has 35 employees, with ten working creatively in the company's photographic/graphics studios, or in layout and copywriting. It is a full-blown operation, offering services that extend all the way through to perfect-bound finished products. Last year, some 1400 tons of paper left the premises.

«We see ourselves as part of the upper quality segment», says Jörg Höllwarth, underlining his statement with a cross-section of the printwork that is processed in-house from A to Z. Often, UV and emulsion varnishes are used. Hybrid technology is also a frequent enhancement for Stern Druck's clients.

«We do not actively look for orders. For us, advertising is work that's executed both well and on time. No job is too small for us», says Jörg Höllwarth, and points to print-on-demand as a further strength at Stern Druck GmbH.

Company founder Jörg Höllwarth (to the right) and his son Michael



Acorn Press, Lancaster (Pennsylvania) USA

Case Study: Ink Preset Systems

Acorn Press is a mid-sized commercial printer who is striking a profitable balance between servicing their local customers well and investing in new technologies to drive efficiency. Their 100-employee facility in Central Pennsylvania was started in 1956, and today has revenues exceeding \$10 million based on their full service capabilities including prepress, digital and offset printing, die cutting, bindery capabilities, mailing and fulfillment.

The workhorses at Acorn Press are their two 6-color Heidelberg SM102 presses. Despite their age, these solid machines are well maintained to deliver quality color results, and recently have been upgraded to deliver increased efficiencies that rival the capabilities of the latest press technology thanks to new InkZone Card systems.

In reviewing the technology landscape, the management team didn't want to take-on the burden of entirely new presses in order to leverage the latest press features like ink-key presetting. Their recent investments focused on expanding prepress capabilities with a Creo CTP installation and the addition of Indigo digital printing capability, so further investment in new sheetfed equipment would have been a stretch. Instead, Acorn Press contacted Digital Information about the InkZone Card, a unique system that leverages their existing prepress investments in CTP to significantly reduce on-press makeready time on their legacy sheetfed printing equipment.

The performance of InkZone on the 40 inch presses, and the low incremental cost of adding another press, easily justified Acorn Press to add their SM74 6-color into the digital ink preset workflow. Management is now evaluating the addition of Closed Loop Color Control Software using an X-Rite Scanning Densitometer.

Scott Reighard, President Acorn Press admits that the amount of makeready waste depends on the prior print run, but like the seasoned presses at many commercial print shops, those at Acorn now boast makeready times that are up to 25% more efficient, saving thousands in monthly time and materials. Operators are not only getting to color faster on each run, there is also increased consistency between presses and crews, making the entire pressroom more efficient.



InkZone Card has been a time-saver at Acorn Press where three Heidelberg Speedmasters are now up to production speed much quicker.



Acorn has taken advantage of existing CTP investment with InkZone Card; it simply plugs in to the job-card reader of their Speedmaster consoles.

Lagoprint GmbH, Rielasingen (Germany)

InkZone Card – taking the footwork out of the network

At Lagoprint GmbH, in Rielasingen, Germany, six ink units on a Heidelberg Speedmaster CD 102 as well as four on a SM 74 are controlled online via InkZone Card. InkZone Card redirects the data transferred from prepress to the separate printing units for precision setting of the ink zones.

Quicker set-up, better quality

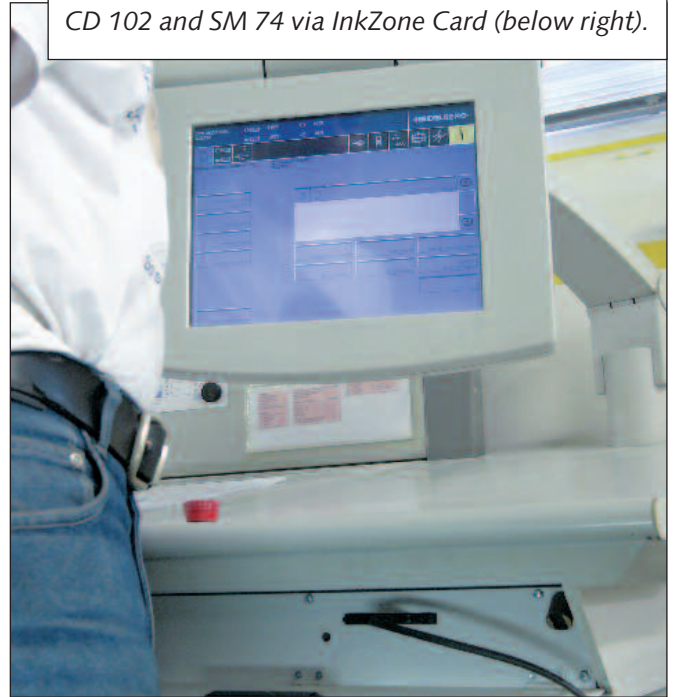
Each day, Lagoprint, a specialist in display, packaging and commercial work, is confronted with difficult forms and increasingly short print runs. So, in order to reduce set-up times to a minimum and achieve production-quality printing quickly, a direct connection for online transfer of the ink zone values was extremely welcome.

Both the Heidelberg printing machines are connected via Ethernet (TCP/IP) and InkZone Card to the existing Prinergy Workflow. The versatile DI-Plot proof software converts bitmap data into ink zone values that are then accessed directly from the printing machine and transmitted online to the control console. The control software included in the InkZone package automatically accepts the conversion and linearisation of the bitmap calculated by DI-Plot in the specific Heidelberg machine format.

A milestone in networked production

According to Metin Sentürk, Managing Director of Lagoprint, InkZone Card is nothing short of a milestone on the road to complete process networking. With the open InkZone concept, software developer Digital Information Ltd. has succeeded where the manufacturers of prepress systems and printing machines have thus far failed: namely, the

The preset data for the ink zones are transmitted online to the control console of the Heidelberg CD 102 and SM 74 via InkZone Card (below right).

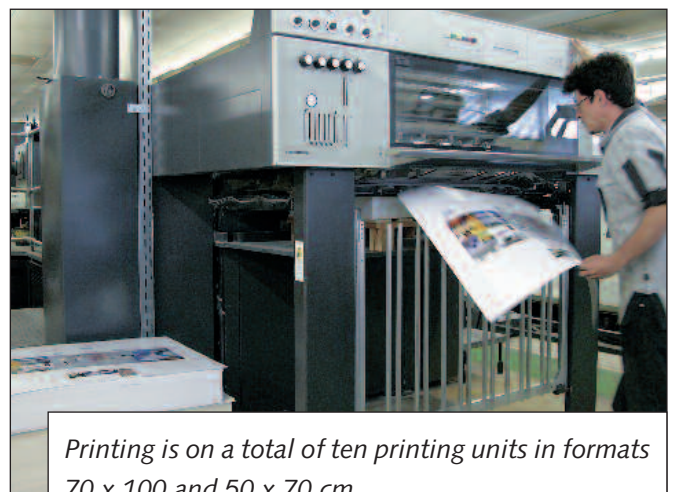


network-based transfer of data between systems of different origins.

«A printing house we know in Switzerland drew our attention to InkZone», says Metin Sentürk. «The online solution promised by Digital Information Ltd. at Drupa 2004 with InkZone Card was exactly what we had in mind to finally replace the so-called «sneaker net» with modern process networking. A half year later, and both our machines were equipped with InkZone Card.»



Lagoprint GmbH is a specialist in display, packaging and commercial printing.



Printing is on a total of ten printing units in formats 70 x 100 and 50 x 70 cm.

Schellenberg Druck, Pfäffikon (CH)

With over 200 employees, Schellenberg Druck AG with headquarters Pfäffikon is one of the region's key graphic industry companies. Together with various subsidiaries, the company is active in all areas of visual communication.

Printing machines operated in Pfäffikon comprise two-, four-, five- and ten-colour machines by Heidelberg and MAN Roland. For all sheet-fed machines equipped with remote ink control, zone setting values are calculated

centrally with a DI-Plot station and InkZone Box. Last-moment changes from the administrative department do not represent a problem for InkZone Box. InkZone Box is equipped with a number slots that correspond to the different machine data carriers. By simply selecting the machine on the integrated touch screen, the zone values will be converted into the correct format.



At Schellenberg Druck AG InkZone is used as the link between prepress and press on Heidelberg and MAN Roland machines.



InkZone Box (centre) writes the ink zone preset data in all familiar printing machine formats to the corresponding data carriers. To the left of the picture is the user interface to the DI-Plot form proof software; the screen on the right shows a preview of the imposed print form.

Conzett+Walter, Schlieren (CH)

Conzett+Walter AG has existed in its present form since 1997. Prepress, printing, finishing and the personalisation of mailings, leaflets, flyers, brochures and forms are accommodated on several floors.

In endless web offset, capacity comprises a total of 23 Müller Martini printing units. A six-colour A52 and an eight-colour Concept use open, PC-based BST Monigraf and GMI Microcolor systems for remote ink control. Up to the spring of this year, calculation of the ink zone presetting values was done on a plate scanner. «We had long been on the lookout for a solution for entering zone values into the control system via CIP3 directly from prepress», says Production Manager and Director Peter Buri. «Thanks to the simple concept and low investment cost, it was the Digital Information solution that finally convinced us.»



Compared to the plate scanner previously used, endless web offset machines are productive one hour sooner for each job.

The connection between the prepress workflow and the two printing machines is formed by a DI-Plot station that calculates the amount of surface coverage from the RIP bitmap and writes the corresponding zone values to a data carrier. The target ink control system (BST Monigraf or GMI Mircocolor) is simply selected from the menu, and the system will then automatically choose the correct format. Peter Buri: «Per job, our machines are now productive an hour earlier compared with the roundabout route with the plate scanner».



At Conzett+Walter, InkZone production delivers the zone values for the BST Monigraf ink zone control system on an A52 (pictured) and a GMI Microcolor system on a Müller Martini Concept.

De Vries Communications Centre, Zierikzee (NL)

A full range of services from creation through to production lie behind the success of the DeVries Communications Centre, founded by Dannie de Vries in 1980. Accordingly, the company is divided into De Vries Advertising and De Vries Print Work.

At De Vries Print Work, production comes off a four-colour KBA-Rapida (Format 52 x 72 cm). In 2002, the company invested in state-of-the-art CtP technology. The digital workflow via direct plate imaging was, however, insufficient; the ink feed profile on the four printing units still had to be set manually at the control console.

Noting the products on offer from Digital Information Ltd, in January 2003 De Vries Communications Centre

decided to fill the gap between the two key prepress and press sectors with DI-Plot and InkZone Box. The company thus scored twice over: with DI-Plot, form proofs can be created from data off an RIP imaging device that is 100% definitive with regard to content and status. At the same time, the imaging data is used to calculate the ink zone values which are then written to a data carrier in the specific KBA format and entered at the control console.

Dannie De Vries: «With DI-Plot and InkZone we reduce the make-ready times on the printing machine by 15 minutes per job. And we also gain from a considerable reduction in paper costs».



At De Vries Print Work in Zierikzee (The Netherlands) a reduction in make-ready times of 15 minutes per job is achieved with InkZone.



The ink zone values converted to the corresponding format in InkZone Box are entered at the control console via data carrier.

Ancient House Press Plc., Ipswich (UK)

A year ago, Ancient House Plc invested in an eight-colour KBA Rapida with CIP3 interface to the Agfa output workflow. With immediate recognition of the benefits of CIP3, Ancient House was looking for ways to transfer the ink zone presetting values to an existing Speedmaster 102 with eight printing units (adjustable after the fourth unit).

At the same time, the company became aware of InkZone Box from Digital Information Ltd. A comparison of cost versus performance led the customer to view an existing InkZone system at Drukkerij Schuttersmagazijn BV in the Netherlands, where the ink zones on three Heidelberg machines – two SM 102s and an SM 74 – were being preset on a central InkZone Box. Immediately after

the visit, Digital Information received an order to supply and install an InkZone Box with InkZone-Perfect. InkZone-Perfect puts Ancient House Press in a position to assign the values calculated for a job to any printing unit regardless of production type (recto/verso or recto only).

There is also web offset production in the Ipswich printing house. Only a few months after commissioning InkZone Box in the sheet-fed area, the old tape drive on the web-fed press was replaced by the Heidelberg Jobcard. By adding the appropriate format to DI-Plot, at no extra cost the customer acquired the option to select ink zones directly from DI-Plot in web offset, too, and write them to the Jobcard directly via InkZone Box.



Ancient House Press Plc. in Ipswich uses InkZone Box for presetting the ink zones on a recto-verso machine (InkZone-Perfect) and a commercial web press.



InkZone-Perfect puts Ancient House Press in a position to assign the values calculated for a job to any printing unit regardless of production type (recto/verso or recto only).

Printing is better double

With Digital Information's Preproofer 740, double-sided formproof production at Koprnt AG is efficient and economical. The output process is controlled by the DI-Plot software package. Linked with InkZone Perfect, DI-Plot also delivers JDF files for presetting ink-zones automatically on two printing machines of different manufacture.

Koprnt AG has been working with DI-Plot from Zurich-based software developer Digital Information Ltd. since 1998. Located in Alpnach Dorf, the family-owned company is one of the early users of this versatile proof software, which can be integrated into any prepress environment. The company continues to work with a delta workflow, with DI-Plot sampling the ripped bitmaps down to the required resolution to produce a formproof that is absolutely accurate as far as layout and content are concerned.

After nearly ten years and with more than 2000 licences granted worldwide, DI-Plot is still holding its own as a future-proofed solution that can keep pace with the latest developments in the different prepress workflow



Preproofer 740 runs at up to 16 double-sided printed formproofs per hour.

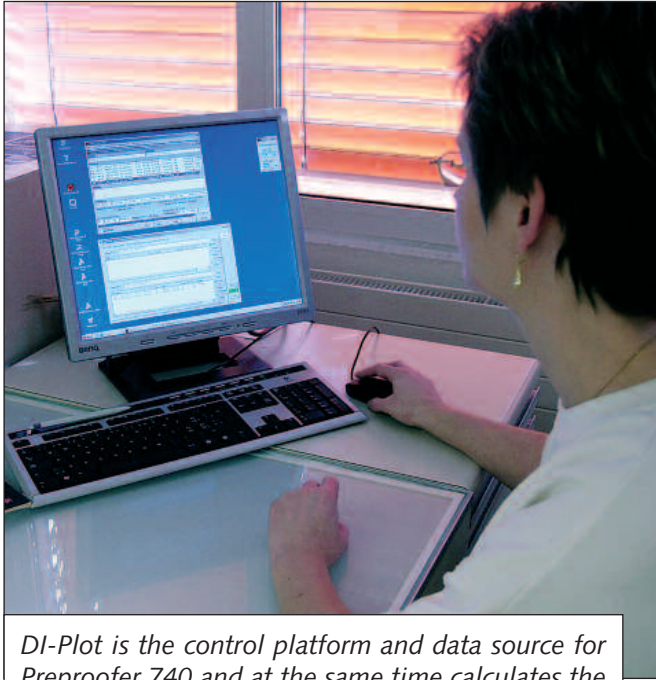
solutions. Which is why Koprnt has recently gone over to double-sided proof outputting with a Preproofer 740 from Digital Information. In a further efficiency measure with InkZone Perfect, the company has now made the connection for presetting the ink zones on two offset machines from Komori (52 x 72 cm) and Ryobi (52 x 36 cm), each equipped with five printing units. DI-Plot is used as the data source and control platform for proof outputting on Preproofer 740, and also for InkZone Perfect. For Managing Director Jochen Konrath, who is in charge of operations, the value of the proof software is confirmed over the long term because it can continue in use with Koprnt's upcoming investment in a new workflow system.

Lower costs, higher performance

In Alpnach Dorf, the annual consumption of print plates is around 13,200. Then there are 6,500 plates for Gersag Druck AG in Emmenbrücke, which was acquired by Koprnt

AG in 1989. At Gersag Druck, production runs on a convertible Speedmaster 74 with five printing units.

With the installation of the Preproofer 740 four-page system, Jochen Konrath can confirm that expenditure on proof production is down by almost a half: "Thanks to Digital Information and Preproofer, we achieve clear savings from several points of view. Compared to earlier methods where we could only output single-sided proofs, we now use both sides of the sheet and consume correspondingly less paper. Also, by dispensing with gluing, we are much faster and more accurate. We gain time, make considerable savings in the cost of materials, and attain a very appealing proof quality that comes close to the actual printing result." And that's not all. With the CMS capability of DI-Plot, when it delivers the formproof Koprnt is at the same time giving customers an "OK-to-Print" that goes a long way to resembling the final print result from the colour point of view, as well.



DI-Plot is the control platform and data source for Preproofer 740 and at the same time calculates the JDF data for ink zone presetting via InkZone Perfect.

Quality with Piezo technology

Preproofer 740 is based on two Epson Stylus Pro 7400 printers – currently the fastest inkjet system on the market. Depending on the chosen resolution, speeds reach up to 16 double-sided proofs per hour, while a new screening method allows excellent reproduction quality down to even the finest details and with low resolutions, too. Micro Piezo

technology functions on the drop-on-demand principle and enables precision control of the ink droplets as far as size, shape and positioning on the substrate is concerned. In addition to brilliant printing results, the outputting process can be accelerated while saving on ink consumption by varying the droplet size according to the subject.

Front and back without turning

Double-sided formproofs can be produced in one pass without turning the paper thanks to the offset configuration of the vertically displaced printers. Preproofer works on the roll-sheet print principle where output of the front is off the roll and output of the back is on the cut sheet. For outputting the back, the sheet is moved by gravity alone and scanned for precision register printing by the system before DI-Plot releases the data. With no mechanism required for turning the sheet, the result is reduced maintenance and fewer spare parts.

With JDF to the ink-zone preset

Print shop production at Koprnt is in a heterogeneous environment. A five-colour from Komori in 52 x 72 cm format, a five-colour from Ryobi in 36 x 52 cm format, plus two A3 Ryobi models, each equipped with two units, add up to a total of 14 printing units.

The installation of InkZone Perfect for online ink-zone presetting on the five-colour machines makes for an economical solution with a high streamlining effect. With InkZone Perfect, both systems can be supplied with presetting data, thus avoiding the need for relatively expensive proprietary CIP3/4 connections for printing machines from two different manufacturers. DI-Plot calculates the JDF files with the zone values from the bitmap data delivered by the imager RIP and then transfers them to InkZone Perfect. The software is not dependent on the type of printing machine and offers functions like linearization to individual printing conditions, the display of ink-zone values, visualisation of the printing job with the separate imposed composite forms, and ductor control. Thanks to a simple drag-and-drop function, the press-man can allocate the individual separations with the preset values for CMYK and special colours to the printing units.

“One thing is clear: the preset solution from Digital Information makes things much simpler and speeds up the process”, says Jochen Konrath. “Previously, we needed between 30 and 45 minutes per printing job for setting the ink zones manually. Thanks to InZone Perfect, we are ready for the production run after fifteen minutes. Also, the software



At Koprnt, ink zones on a Komori and a Ryobi are automatically preset using InkZone Perfect.

allows us to adapt the calculated preset data to the effective ink-zone values and thus further optimise set-up times. A further productivity bonus comes from the option to save job data for repeat jobs."

Buoyant growth

Koprint AG was founded in 1984 when Austrian Werner Konrath acquired former book printers Ehrlí Druck AG in Sarnen. Eleven years later came the move into modern premises in Alpnach Dorf, the present-day location, and the change of name to Koprint AG. Since 1989, Emmenbrücke-based Gersag Druck AG, a company that is well established in the region, has also been owned by Koprint AG. Recently, Kneuss Print AG of Lenzburg was taken over by the service provider, which has now grown to employ more than 40 staff. The customer base is mainly manufacturing companies, banks, insurance organisations and firms in the IT sector. Because Koprint remains largely independent from agencies, the services are not restricted to tasks relating to printwork production but range from the development of graphic design concepts through artwork production and printing to the finished product.



The satisfaction shows (from left to right): Gregor Keiser, Manager Prepress, Jochen Konrath, Managing Director Koprint AG, Michael Haenni, Digital Information Ltd.



With a simple drag-and-drop function, the pressman assigns the preset values to the separate ink zones on the printing machine.

Preproofer 740/780/940/980 configuration

1x DIL Preproofer 740/780/940/980 kit

DI-Plot software package
Stand rack and guide unit for Epson Stylus Pro 7400, 7800, 9400 or 9800
Electronic printer control unit for Preproofer
15 cm/6" core adapter for Tecco's «Mediaware DIL Preproofer»
range of paper (24"/61 cm or 44"/111 cm)

2x Epson large format printer

Two Epson Stylus Pro systems, depending on Preproofer model: Stylus Pro 7400 (C11C594011), Stylus Pro 7800 (C11C594001), Stylus Pro 9400 (C11C595011), Stylus Pro 9800 (C11C595001). The printers must be equipped with Epson's optional Ethernet interface «EpsonNet Print Server5» (C12C824342).

1x PC

CPU Intel Pentium 4, 3.x Ghz, 1 GB RAM, ATA-Disk 10'000 RPM, 17" TFT-monitor, 10/100/1000 Mbit Ethernet, floppy, CD, keyboard, mouse, USB (for hardware protection key), ethernet network, 1x RS 232 (for serial communication with Preproofer board), Microsoft Windows XP Professional operating system