The Value of G7 to Print Service Providers

AUTHOR: John Parsons, Principal of IntuIdeas LLC

"The knowledge acquired in becoming a G7 Master gives print service companies access to a proven foundation for creating consistent color across all devices–at considerably lower costs."

Tim Baechle,
Dir. of Global Print Markets & Technologies, Idealliance

G7 ⊘ Publications

About the Author

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About Idealliance

Idealliance (International Digital Enterprise Alliance) is a not-for-profit membership organization that has been a leader in information technology and publishing since 1966. Idealliance advances core technology to develop standards and best practices to enhance efficiency and speed information across the end-to-end digital media supply chain - creation, production, management, and delivery of knowledge-based multimedia content - digitally and in print.

Idealliance is where media creators and technology communities collaborate to craft best practices, advance standards, and certify people, processes, and systems to achieve the highest performance in creation, production and delivery of graphic communications.

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The Value of G7 to Print Service Providers

Print service providers of all types know that a measurable, predictable, and uniform color management process provides significant business advantages.

The printing industry is made up of many different types of companies. Printers specialize in vastly different outputs: publications, catalogs, signage, general collateral, direct mail, labels, packaging, and other, more obscure specialties. Each uses its own combination of substrates, inks, and technology to mass produce images and text on a surface.

No matter what the printed medium, these providers overwhelmingly rely on color.[1]

Clients rightfully view color printing as the highest possible level of service, because it tends to engage the user more readily than monochrome printing. There are exceptions, of course, but color is generally considered a superior visual medium. It also requires more time and materials to produce, making color print reproduction a costlier– and potentially more profitable medium.

Challenges to Accurate Color Reproduction

Although simple in concept, process color printing is a complex manufacturing challenge. This is due in part to subjective differences in human perception. It is also compounded by a long list of variables, including differences in Figure 1 below:

No matter what combination of printing technology is used, brand owners have a reasonable expectation that color will be visually consistent–as described in the Idealliance companion piece, The Value of G7 to Brand Owners. However, as brands and agencies become more global and media-savvy, increasingly, they will require visually consistent color output, across all devices and types of printing.

Color management technology and standards have evolved considerably since the early 20th Century work of the International Commission on Illumination (CIE). The measurable, scientific basis for color was more recently codified as a vendor-neutral color management system of CIE-based profiles by the International Color Consortium (ICC). Today, manufacturers and users of color input, output, and management systems virtually all accept ICC profiles as the standard framework for characterizing and translating color from one device to another.

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[1] In this paper, the word "color" means subtractive or process color, namely Cyan, Magenta, Yellow, and Black (CMYK) ink or toner printed on paper, plastic, or some other substrate. The use of specially formulated spot or custom color inks is a separate topic–as is the use additive RGB color in broadcast or Internet media.

Figure 1

Paper and other substrates...	Ink or toner composition...	Types of printing processes...	Environmental, mechanical, and procedural factors...
variations in color, brightness, reflectivity, porosity, chemical coating, and other properties affecting optical appearance	between one type of colorant and another (e.g., ink versus toner) and between different batches or manufacturers of a particular ink set	traditional (web and sheet-fed offset, gravure, flexography, screen printing, etc.) and digital (inkjet, EP, dye sublimation, etc.)	humidity, temperature, the normal "drift" of a device, ink trap, and ink laydown order

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Increasingly, brands will require visually consistent CMYK color output (at the very least) across all devices and types of printing

The ICC Profile Approach

With the science of color so well established, it follows that multiple ICC-profiled devices should (at least in theory) be able to scan, translate, and output the same color consistently with far less time and labor cost than a manual, hit-or-miss process. For any CMYK printing device, color management systems create a "link" to convert RGB to CMYK color. When correctly applied, this produces consistent color on each device. Creating such a link involves looking up the RGB values in a scanner's ICC profile, for example, then looking up the resulting CIELAB value in a press' ICC profile to get the equivalent CMYK value.[2]

Before ICC profiles, color management was possible but extremely cumbersome. Each pair of devices required a custom transform, so that three RGB sources and two CMYK output devices required six links (figure 1), while seven of each would require 49 links.

ICC color management greatly simplified the process, by introducing the concept of "device independent color." In this model, each device translates to and from a common color space via its own ICC profile-based link. Using the same example, there would be only 5 links for 5 devices, and only 14 links for 14 devices (figure 2). Each profile is independent of the others. If a device changes, only its profile is affected.

Despite this improvement, ICC profile-based color management poses a number of difficulties for printers. In many cases, source PDF files are already defined in CMYK (for one output condition) and have to be adjusted for multiple output devices.

There are other, more serious complications. Output devices, especially digital ones, tend to drift over time, and can vary under different environmental conditions.
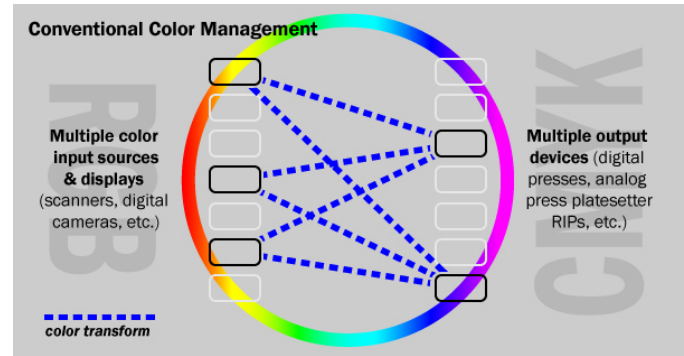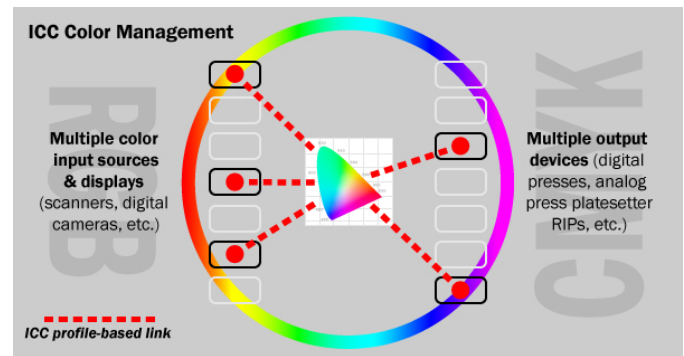
Figure 2

Figure 3

To reduce the "heavy lifting" aspect of ICC color management, printers need standard ICC profiles and a common calibration methodology.

To create a viable ICC profile for an output device, a test target must be printed, scanned with the right measurement device, and analyzed with the right software. The last two steps are not difficult–for a qualified color professional–but the first one involves significant press time, especially for non-digital (e.g. offset, flexo or gravure) presses. Most printing companies cannot afford the time and labor costs needed to create and continually update press profiles for every device. To reduce the "heavy lifting" aspect of ICC color management, printers need standard ICC profiles and a common calibration methodology.

2   Hutcheson, Don; Principles of Color Management; November 22, 2001

Standard profiles (e.g. GRACoL and SWOP)

In 2006, Idealliance released two color reproduction specifications for commercial sheetfed offset printing (GRACoL2006) and publication printing (SWOP2006)[3], to reduce the burden of custom press profiling and help print specifiers work more effectively with offset print suppliers.

Available as free ICC profiles (or their source characterization data), GRACoL and SWOP were originally created by averaging several carefully-controlled research press runs using ISO-standard inks and paper and a new calibration method known as G7. The key role of G7 was to adjust the research presses to a "common neutral appearance" using simple plate curves, yielding a standardized, repeatable neutral tonality and gray balance, even before the profiling target was printed. The advantage of G7 is that today, any press using ISO-standard inks and paper can be G7-calibrated to the same common neutral appearance as the original research presses, and can therefore use the same generic GRACoL or SWOP profiles, without the need for expensive time-consuming custom profiling.

Understanding G7

G7 is primarily a specification of gray appearance that can be applied to any printing system, like an offset press, a desktop printer, or an inkjet printer. G7 defines the two main visual attributes of gray, namely tonality (lightness and contrast) and balance (neutrality).

G7 is also a universal calibration methodology that can be used to adjust any press or printing system to a common neutral appearance, regardless of inks, substrate, or printing technology.
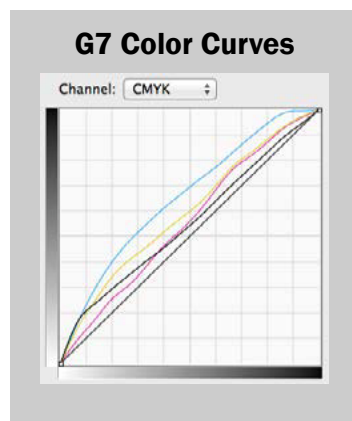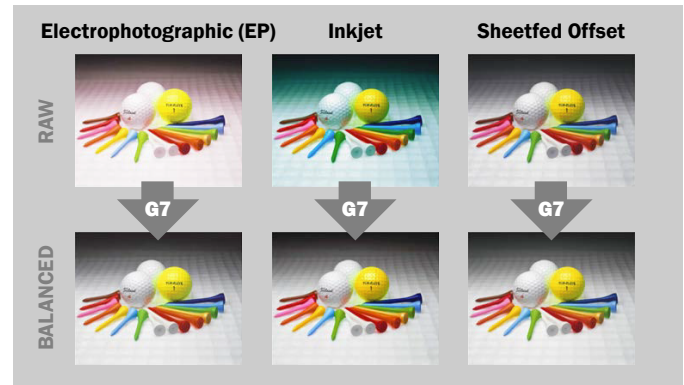
Figure 5

Figure 4

The G7 method achieves the G7 appearance specification using simple CMYK ink or toner curves (Figure 4) in the RIP of a platesetter or digital press. G7 allows any device–digital or analog–to produce a common, shared neutral appearance without the use of ICC profiles. However, although G7 reduces the need for offset press profiling, it is not a replacement for ICC color management on other print technologies, because GRACoL and SWOP are based on offset.

Figure 5 (bottom row) shows how G7 matches neutral gray image areas on three different devices. But differences in the yellow golf ball show that G7 is not a true color management system. To match colors exactly, ICC color management would also be required.

"G7 is not a color management system. It's a gray management system," says G7 inventor Don Hutcheson of HutchColor, LLC. "But getting grays right first, helps improve ICC accuracy and efficiency, and when the source color is unknown it's often enough for 'pleasing color.'"

There is no such thing as "G7 certified" presses, paper, or inks. Rather, G7 status is attained by trained individuals (G7 Professionals and G7 Experts) and by companies (printers, publishers, and agencies) who qualify for G7 Master status on an annual basis.[4]

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[3] Recently these were updated to GRACoL2013 and SWOP2013 which are almost identical in appearance and, for most purposes, interchangeable.
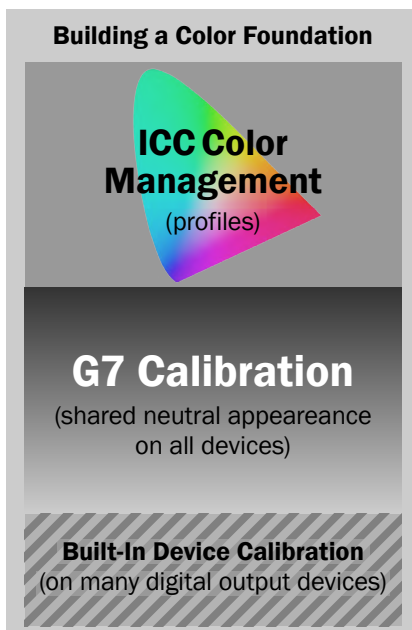[4] See the Idealliance website for more on individual G7 certification and G7 Master qualification for companies.

G7 Calibration and Beyond

The G7 calibration process is fast and simple using any of several G7 Certified software applications. First, with the printing system in its normal default state,[5] a standard target–such as a P2P51–is printed then scanned on a spectrophotometer. The software generates the curves automatically. Once the curves are installed in the RIP, the device is calibrated. Once a device is G7 calibrated, a custom ICC profile can be created and used with confidence. In effect, G7 and any built-in device calibration serve as a foundation for a better and more cost-effective use of ICC profiles (Figure 6).

G7 behavior should be monitored regularly by printing and scanning either a full P2P target (or a smaller quality control target) in the margin of a proof or press sheet, or on a special test sheet printed at regular intervals.

Figure 6

Building a Color Foundation

ICC Color Management
(profiles)

G7 Calibration
(shared neutral appeareance on all devices)

Built-In Device Calibration
(on many digital output devices)

"People ask, 'How often should I re-calibrate?' or 'How often should I rebuild my ICC profiles?' Hutcheson remarked. "My answer is, 'Check calibration as often as possible. Recalibrate as often as necessary. Re-profile as seldom as possible.' With G7 as a baseline, you shouldn't need to generate new profiles every time a condition changes."

Business Benefits Summary

In the Appendices to this paper, a number of print service providers have detailed the economic benefits of using G7. For printers, the main benefit is often cost reduction.

The vast majority of printers experience a dramatic reduction in makeready–sometimes by as much as 70%–immediately upon implementing G7. Sandy Alexander (Appendix A) estimated make ready savings at $200,000 per year. Even without comprehensive ICC color management, G7-calibrated devices simply come up to color faster, and with less on-press color adjustment. As shorter press runs become more prevalent, makeready reduction becomes even more essential to keeping presses profitable.

Another major benefit of G7 is more consistent re-prints. Controlling the tonality and gray balance of every press run to G7 specifications helps ensure subsequent runs will have very similar visual appearance–even months or years later.

Yet another benefit affects printing companies with a unique or expanding hardware base. Multiple devices of the same type–often in different locations–plus the proliferation of device types poses a formidable color challenge. With one, simple calibration methodology, G7 gives printers the ability to create a shared neutral appearance on offset, inkjet, EP, and other devices. This is not just a savings in time and operator costs. It also gives printers new sales opportunities with clients who demand consistent color–no matter what device is required.

Finally, for printers who place a premium on precision-quality color, G7 represents an interesting cost savings benefit. G7's inherent gray stability and shared visual appearance means that ICC profiles have to be made far less often, keeping presses free to do more profitable work. Sandy Alexander, an early G7 adopter and advocate, estimated that savings at over $1 million annually. (See Appendix A.)

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[5]   Digital inkjet or EP presses very often have an automatic self-calibration feature, designed to compensate for normal color "drift" on such devices. Typically, this process is done at the start of each day or shift. Physical calibration of this kind serves as a stabilizing "base" on which to build G7 calibration. (See Figure 6.) Offset presses have no such luxury, although many platesetter RIPs have calibration or linearization features.

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A Strategy, Not a PR Play

Attaining G7 Master status should never be considered merely as a sales talking point. When fully applied, the knowledge acquired in becoming a G7 Master gives printing companies access to a proven foundation for creating consistent color across all devices–at considerably lower costs. Rather than just for bragging rights, becoming a G7 Master actually enhances your whole workflow. In today's competitive world of print, it's the right tool for the job.

Case Study 1:

Printer Use Case – Sandy Alexander

Through many years of developing "symbiotic strategic partnerships" with clients, this full-service printing and marketing powerhouse uses G7 as the foundation for producing great color–and saving money in the process.

"A powerful number to ponder is the estimated dollars saved in make ready as a result of color management techniques– G7 and profiling combined. We estimate this to be over $1 million a year."

Gregory Hill, Manager of Prepress Systems, Sandy Alexander

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G7 Case Study #1:

Printer Use Case – Sandy Alexander

An industry leader like Sandy Alexander must be more than just a printing company. For over 50 years, the tri-state area firm has become a single point of contact for marketing and promotional services, including multi-channel campaigns, data management, fulfillment, and of course printing. It has been a frequent winner of the Sappi Gold Award for quality and technical excellence, and has lead in the print sustainability movement, with both ISO 14001 and Sustainable Green Printer certification.

With such an emphasis on full-service quality, it's only natural that the company prides itself on the highest level of color quality and consistency. This is a challenge with so many types of print, including sheetfed and web offset, HP Indigo digital, and both wide and grand format. But it is a particular point of pride at Sandy Alexander to offer color consistency for multi-channel marketing products on any substrate–including paper, fabric, wood, metal, and vinyl. According to their website, the goal is "brand consistency on any piece from a postcard to a stadium wrap."

"G7 does the heavy lifting; it provides gray balance and proper tone reproduction. On top of that we build ICC profiles. Between the two, we get a visual match from one output device to another."

 Gregory Hill, Sandy Alexander

Such lofty aspirations require a firm basis in color management technology. "Our clients look to us as a single source," said Manager of Prepress Systems Gregory Hill. "We may have a campaign where we're producing something in wide format, something in litho, and maybe a companion piece in digital. All those things need to match. They all use different technologies, different substrates, different ink sets. For example, magenta in our wide format devices is a different color than magenta litho ink."

Hill continued, "G7 is a tremendous starting point, but we also use ICC profiles. G7 does the heavy lifting; it provides gray balance and proper tone reproduction. On top of that we build ICC profiles. Between the two, we are able to get a visual match from one technology and substrate and one output device to another."

One of the unrecognized benefits of G7, according to Hill, is that it makes ICC profiles more valuable and long lasting. "In the litho world, there are a huge number of variables, like humidity, temperature, raw materials–all of which are constantly changing" he said. "G7 gives us a really good starting point. From there, we build ICC profiles that last. If conditions change, all we need to do is bring the device back to G7–which is a lot faster than a new profile."

$200k SAVED PER YEAR

Without G7, the cost of creating good ICC profiles for multiple presses, conditions, and substrates would exceed $200,000 per year, not including loss of business caused by press downtime.

The economic implications are enormous. "Creating ICC profiles is expensive. If I'm running a test form on a web press to make a profile, I'll spend up to two hours of press time," he said. "I'll use an enormous amount of paper and ink, and there's a crew involved. Without G7, I'd have to do that four times a year on each press, and double that if we're talking about coated and uncoated paper. That's time we're not using to print jobs." Hill estimated that without the foundation of basic device linearization and G7 calibration, the cost of creating good ICC profiles for multiple presses, conditions, and substrates would exceed $200,000 per year, not including loss of business caused by press downtime.

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Like many G7 Master printers, Sandy Alexander has realized significant make ready savings from both G7 and good ICC color management. "A powerful number to ponder is the estimated dollars saved in make ready as a result of color management techniques–G7 and profiling combined. We estimate this to be over $1 million a year."

$1M
SAVED PER YEAR

Dollars saved in make ready as the result of color management (G7 and profiling combined) are over $1 million/year.

Color-related cost savings are only the beginning. For many years, Sandy Alexander's color management prowess–combining G7 and ICC color management–has enabled them to charge premium prices, as well as keep clients satisfied in decades-long relationships. "Clients recognize us as a premium quality printer, not a commodity-level printer," Hill said. "It's not just about color, but other factors like service and our breadth of offerings."

Color consistency does have a significant role in day-to-day customer satisfaction. "It's not enough just to say, 'We're G7,'" Hill noted. "We live it. Because our press sheets match a GRACoL-based inkjet proof in minutes instead of hours, our make ready is way down. We're saving our clients' time, meeting their needs, and exceeding their expectations. That leads to nice relationships."

Hill concluded with some general advice to the printing industry as a whole. "Because of improvements in technology, most print shops can produce a nice job on any given day," he said, "but G7 helps achieve form after form, day-to-day consistency. In addition, if a designer creates a project for a specific use, G7 and color management make it more valuable for repurposing. If a file originates as RGB–perhaps for use on a web page–it can be converted to CMYK with an ICC profile. Then, with G7 methodology in use, it is in an appropriate place for print."

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Case Study 2:

Printer Use Case – The Standard Group

An award-winning printing, marketing, and logistics company, The Standard Group has used G7 for many years, relying on its clearly defined process to drive greater consistency, faster make ready, and lower cost.

"Rework due to color variations is less than one-half of one percent."

Scott Reighard, COO, The Standard Group

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G7 Case Study #2

Printer Use Case – The Standard Group

In Central Pennsylvania, The Standard Group has secured a lasting reputation for quality and reliability. The company is a regional provider of print marketing and logistics for enterprise marketers and agencies. It is also a full commercial printer offering managed collateral, packaging, signage, promotions, variable data, and mailing/fulfillment services.

> **"We've been using G7 for over 10 years. To go back to the traditional way would be like asking us to run 4 color process jobs one color at a time."**
>
> **Scott Reighard, COO**

The Standard Group is no stranger to color quality management. It was recently asked to create the color standards for a Fortune 1000 manufacturer–distributing profiles and guidelines to its partners and printers worldwide. With all its clients, The Standard Group enjoys the reputation of being one of the best quality printers in the country, not only printing their materials but also helping clients manage their colors and their brand.

The company was an early adopter and advocate for the GRACoL color specification for sheetfed offset printing, and of the G7 methodology for grayscale calibration across multiple devices–including both offset and digital presses. "The ability for us to achieve quality and consistency of process (CMYK) print color across multiple devices and facilities with G7 is absolutely essential to our business," said The Standard Group's CMO Thanh Nguyen. "Customers' appetite for print has changed to shorter runs and greater frequencies. Because our facility equipment is calibrated through G7, we can combine offset with digital and personalization, giving us the greatest flexibility and more cost-effective results for our customers."

G7 has dramatically reduced client complaints related to color. "Rework due to color variations is less than one-half of one percent," said Scott Reighard, COO of The Standard Group. "We've been using G7 for over 10 years. To go back to the traditional way would be like asking us to run 4-color process jobs one color at a time."

Reighard credits G7 with The Standard Group's dramatically faster make ready times. "G7 has taught us that if you manage the input variable and the process itself, you can achieve a consistent outcome," he said. "Because of G7, we have a process that drives greater consistency, faster make ready and lower cost. If we didn't use G7 to run target densities and gray balance, it would triple our make ready time."

The business value of consistent color is clear, including higher price points and client loyalty. "Our clients are willing to pay more for our printed product, knowing that we follow G7 methodology," Nguyen said. "Because of our ability to achieve a higher print quality and consistency, we were able to retain more business and achieve greater loyalty. One of our customers changed advertising agencies three times and fulfillment vendors twice, but stayed with us as a print partner because of our color management and print expertise."

Reighard noted that their use of G7 calibration has made their overall operations more efficient, requiring greater process consistency by Standard Group employees. It has also allowed the company to streamline the material supply chain and maintain a level of sourcing consistency.

3X LESS MAKE READY

"If we didn't use G7 to run target densities and gray balance, it would triple our make ready time."
— Scott Reighard, COO

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Team morale has also benefited. "The G7 methodology has provided greater employee pride in the quality of work we produce," Reighard said. "It also helps break down barriers and to unify the press and prepress team. Now they have a joint, measurable goal. One can't have success without the other."

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Case Study 3:

Printer Use Case – Hopkins Printing

Adopting G7 allowed a full-service commercial printer to provide consistent color matching of proofs and final output on multiple devices. This reliability factor dramatically reduced color-related disputes and improved client satisfaction.

"...basing our approach on gray balance...has resulted in fewer press OK's because our customers trust that we can hit our proofs.

Roy Waterhouse, President, Hopkins Printing
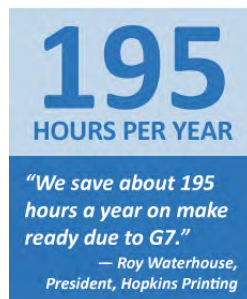
G7 Case Study #3

Printer Use Case – Hopkins Printing

For the past 40 years, Columbus, Ohio-based Hopkins Printing has been the quintessential "local printer"–with a big-picture approach to solving the communication needs of over 350 regional clients. It offers a full range of commercial printing services, including five Heidelberg sheetfed offset presses, as well as digital, wide-format, and grand-format color devices. It also provides mailing and related data management, as well as a web2print storefront and email marketing services.

President Roy Waterhouse stresses the importance of consistency as a key to winning and retaining business. "We have found by delivering a consistent product with above average service that we can grow our business," he said. "By having consistent print, we are able to consistently satisfy our customers."

For Waterhouse, such consistency is especially important when it comes to color. "Many of our customers are verticals like retail, banking, agencies, hospitals and insurance," he noted. "These consumer-facing brands have a strong need for consistent color. They also expect consistency across offset, digital, and wide-format." The majority of Hopkins clients supply PDF files, which are processed in an Agfa Apogee workflow–with hardcopy or PDF proofs supplied before plates are made. At the proofing stage, color matching is essential.

The Importance of G7

To reduce makeready and color discrepancies across its fleet of output devices, Hopkins began to implement G7 methodology in 2009. Hiring a G7 Expert consultant, the company was qualified as a G7 Master printer– and has remained so ever since.

195
HOURS PER YEAR

"We save about 195 hours a year on make ready due to G7."
— Roy Waterhouse, President, Hopkins Printing

"By basing our approach on gray balance, we have experienced an easier time getting to color and holding color," Waterhouse said. "This has resulted in fewer press OK's because our customers trust that we can hit our proofs. It has also reduced the amount of hard proofs we send out. Customers are more confident that our sheets will look good, so they are more comfortable with PDF proofs."

"A benefit of G7 is more trust between sales, production and customers."

Roy Waterhouse, President, Hopkins Printing

Ongoing operational costs are also affected. "By using G7, we have been able to reduce our makeready time," he said. "According to my pressroom manager, we save about 195 hours a year on make ready. We are just running to the numbers and then trusting the numbers to produce the results. With our proofs and our press sheets matching closer, we are not running a wide range of densities–which is hard to do consistently."

Cost savings from makeready reduction is only part of the G7 benefit. "A benefit is more trust between sales, production and customers," Waterhouse noted. "Because we are more consistent, there are fewer customer issues. This means we are selling and producing great product instead of spending time with customers working on complaints."

Case Study 4:

Printer Use Case – GLS / NEXT Precision Marketing

Midwestern regional print and marketing services company GLS offers its clients many brand communication benefits–including consistent, high-quality color.

"After implementing G7, the number of press checks has declined from as many as five per day to about 2-3 per week, with each approval taking minutes rather than hours.

Jim Benedict, Marketing Director, GLS

G7 Case Study #4

Printer Use Case – GLS/NEXT Precision Marketing

For many years, the mantra of Minnesota-based GLS/ NEXT Precision Marketing has been "connecting buyers to brands." A quick look at the company's list of services confirms their multi-faceted approach to that goal. Marketing services include everything from branding and strategy consulting to cross-media campaigns, design services, and analytics. Print services run the gamut from offset and digital to direct mail, fulfillment, and packaging.

Brand image continuity is also a core principle, according to GLS Marketing Director Jim Benedict. In the corporate office lobby, he pointed out a permanent display of color output from multiple types of print offered at GLS–each one matching the other, thanks to the results of consistent G7 calibration.

"We do a lot of CMYK tints and solids of our clients' unique brand colors–on all our devices," Benedict noted. "Some of those colors are real pains for other printers. Blues tend to look purple; reds can look washed out. With our approach, we can nail these colors, and really reduce our make ready getting there."

It was not always so easy. "In the old days, what we would have to do is look at a traditional Pantone book for the CMYK values," he said. "Then, depending on how particular the client was, we would have to chase color from job to job." Benedict recounted that under the old model, press checks were much more frequent–typically five a day. After implementing G7, the number of press checks has declined from as many as five per day to about 2-3 per week, with each approval taking minutes rather than hours. "Clients just don't fly in any more. They trust us to hit their colors," he said.

5X LESS MAKE READY

"Without G7, it would take about 500 sheets to get up to color. Now, we're able to do it in 100 sheets."
— Jim Benedict, GLS

The operational cost reduction resulting from G7 calibration of GLS' offset presses has been remarkable. "Without G7, it would take about 500 sheets to get up to color," Benedict recalled. "Now, we're able to do it in 100 sheets."

"G7 has allowed us to achieve repeatability in color quality and consistency across multiple devices and facilities."

Julie Robinson, GLS

GLS works closely with its customers to maintain their brand color standards. "G7 has allowed us to achieve repeatability in color quality and consistency across multiple devices and facilities," said Premedia Manager Julie Robinson. "This repeatability has created assurance with our customers that we will deliver a quality piece that meets their color standards on an ongoing basis."

Scheduling at GLS has also been affected. "G7 has made a large impact on our ability to be able to match the proof on the first or second pull during the make ready," said Production Scheduler Steve Schwartz. "This has made make ready times much more predictable. In scheduling the volume of jobs that we have at GLS, this consistency has significantly improved our ability to hit the scheduled times for each job. Another obvious benefit is the ability to move jobs between our presses due to workload and still have confidence that each press will be able to match the color proof."

Benedict also noted that G7, and the reputation for consistent color, has emboldened the company's 23 sales people to bring in significant new business.

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Case Study 5:

Printer Use Case – ZON Retail Environments

G7 methodology is not limited to offset litho printing. A leading producer of retail displays and other printed textiles proves that effective color management is possible in the challenging realm of dye sublimation heat transfer printing.

"The benefits of G7 include a marked reduction in time, achieving the right color in 2-3 hours instead of 2-3 days, or even weeks.

Bruce Compton, Print Development Manager, ZON Retail

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G7 Case Study #4

Printer Use Case – ZON Retail Environments

Printing is not the single manufacturing process it was in the days of Gutenberg. On a regular basis, we invent new ways to apply images and text to surfaces–quickly, automatically, and at whatever volume required. One such invention is dye sublimation heat transfer, which is used to print images onto textiles. One company, ZON Retail Environments, has succeeded with this process, thanks in part to its advanced approach to color management in this atypical printing environment.

"Color quality and consistency is very important to the larger brands," said ZON Retail's Print Development Manager Bruce Compton. "When brands utilize different media, like printed paper and fabric, they expect us to create reasonably consistent color, even if the process for each media type is completely different."

> **"Brands expect us to create reasonably consistent color on all media, even if the process for each type is completely different."**
>
> **Bruce Compton, ZON Retail**

ZON Retail often must match the color appearance of offset or digital print produced by other service providers. This can only be done, Compton maintains, by adhering to a common calibration and color management standard–which begins with G7 methodology. "More and more, knowledgeable buyers are requiring that kind of standardization," he said.

Compton began exploring G7 in 2015, as part of his overall mission to bring standardized color management to fabric printing–which is far different from other printing types. "Think about offset," he said. "That's a controlled environment, with predictable dot gain and ISO standards

ZON Retail's color work has won recent industry recognition.

for paper and ink. But with dye sublimation, depending on the fabric, speed, temperatures, and pressure during the transfer process, dot gains can be between 10 and 40 percent! With all those variables–and no standards–you can see how someone could be chasing color for a long time."

By controlling the main attributes of gray–tonality and balance–G7 has given ZON Retail far greater control over color. "With G7, we can eliminate or control the variables inherent in dye sublimation printing, and create far more consistent results."

> **"G7 allows me to get a quality print out very quickly, without chasing color for a week."**
>
> **Bruce Compton, ZON Retail**

Compton is clearly an early adopter of G7 for his particular niche. "In the dye-sub arena, there's not a lot of information out there," he said, emphasizing the importance of working with a G7 Expert. Despite the challenge of adapting a dye-sub process to G7–originally developed for traditional print–he said the results are

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worth it. "It allows me to get a quality print out very quickly, without chasing color for a week," he said. "I've worked with color management since the mid-1990s, but I had mixed results when I brought that knowledge into the dye-sub arena. G7 has allowed me to transition that knowledge into this type of printing."

The benefits of this transition include a marked reduction in time–achieving the right color in 2-3 hours instead of 2-3 days, or even weeks.

ZON Retail is also beginning to see business increases resulting from their color quality and time reduction. "The color we're able to produce now, and the consistency of that color, is definitely bringing us work," Compton said. "My sales guys tell me it really makes a difference. I'd say that G7 has improved sales."

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