In November 2015, Color Ad Packaging, based in Winnipeg, Canada became the first North American printer to be awarded the Idealliance G7 Master Qualification Printer status based on a gravure print submission.

While there are approximately 10 gravure G7 Master Printers in Korea and Asia, Color Ad is the first gravure G7 Master Printer in North America. Compared to many of the more common print processes, gravure is a much more difficult print process to control. Color Ad’s journey to achieving G7 calibration shows the importance of using measurement and standards to control print processes.

Color Ad Packaging is a large, high end, food grade flexible packaging printer that has both gravure and flexo print capabilities. Color Ad prints for a number of large internationally known consumer food product companies. The story began when one of Color Ad’s customers requested Color Ad to print their gravure bags in compliance with G7 specifications.

Contracted to support the success of the project, I wondered how Color Ad would respond to the customer’s request; G7 is a challenging process to calibrate for the gravure environment. Contrary to other print processes, such as litho and flexo where a new plate is made to correct the G7 calibration, the gravure process requires the engraving of a new cylinder – a procedure that is expensive and time-consuming. Most gravure printing companies do not engrave their cylinders on site, which means that making a simple change to the curve as is typically required for calibration, can take days. Gravure print typically looks fuller and more vibrant than some of the more notable litho profile standards, such as GRACol or Fogra. Color Ad’s mission was to develop a higher gamut G7 print condition for their customers.

At Color Ad, I met with Rob Turner, Print Operations Manager and Chip Batten, President & CEO. In the meeting, instead of being worried about the challenges of calibrating a gravure press to G7, they expressed interest in using the process to develop greater control and predictability with their gravure print quality. “We see G7 as a potential way to improve our process,” Rob said. “Though we are glad to do it for any customer whom may request it, we think that all of our customers can benefit from improved process control.” One consideration was the many spot colors typically used on Color Ad’s products. The measurement and assessment parameters used within the G7 process controls can be used to control spot colors.
as well. Chip and Rob laid out a timeline for the project, assured the customer of their commitment to process improvement, and thus, Color Ad’s journey towards G7 began.

First, Color Ad worked with their ink supplier and cylinder engravers. For the ink company, this meant ensuring that the ink colors matched the standard, ISO 12647-2. This proved to be a simple task and the ink company was able to deliver ink that met the color requirements. Once the ink was created, the next step was to perform the initial print run. With the first run on press, targets were measured and correction curves were then created.

Normally once correction curves are created, the following print run should be close to meeting G7 compliance. If it is still slightly off, then another set of adjustment curves are created and new cylinder engraving is produced, which pulls the results in so they pass G7 compliance. This procedure is much more complex for the gravure print process. In Color Ad’s experience, when the second print run was produced, it was very close, but not close enough to meeting G7 compliance. While most of the resulting measurements were in correct gray balance, the shadow area was slightly off-neutral, resulting in a failing grade. Rob and I spoke about this after the completion of the second run. “You guys are really, really close! I think you are good to go as far as running jobs are concerned,” I told Rob. “It looks good.”

Though the result of the second print run was acceptable, Rob wanted to make sure Color Ad got it right. “I don’t want to use this yet – I want to make sure we have 100% accuracy. If we’re going down the G7 path, we are doing it right. That means getting our G7 Master qualification and getting everything to pass.” Color Ad was well on their way to achieving their G7 Master certificate.

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However, as Color Ad reviewed their third version separations, the results had worsened. Rob looked at the technical aspects of the press to determine what may have caused the inferior results, while a G7 Expert, provided by Southern Graphic Systems, re-examined the data to look for clues. Rob identified some differences in print condition and after consulting with the G7 Expert, Color Ad was hopeful that the next version would be correct.

Finally, Color Ad performed a fourth press pull. This time, the results were in-line with expectations. On November 23, 2015 Rob emailed me, “I think we have it this time. We are just waiting for the results to come in from Idealliance.” He sent me a copy of the final data for my review. They did it – the data was perfect. Color Ad had produced a G7 Master submission that passed all of the requirements for G7 Master – on gravure.

A few weeks later Idealliance issued the G7 Master certificate. What began as a request by a valued customer, turned into a journey for Color Ad that promises to improve their processes for all customers. “One thing that struck me,” Rob said, “was that we learned a lot through measurement. There were things we picked up by measuring that we wouldn’t have known otherwise.” By using the measurement methods practiced as part of G7, Rob was able to identify variables that were causing slight changes in the printing process. “We are building
continuous measurement into our production process. We will not just be doing G7 on the day we calibrate – we will be running this procedure as part of our daily process.”

For Color Ad, the improvements are just beginning. “We are very happy with what G7 taught us,” Chip Batten said. “We are now ready to take what we learned, along with the improvements in our process and offer these to our entire customer base.” Now Color Ad’s customers bring their designs to this gravure printer with the assurance that their G7 based designs can be printed accurately as designed.

About the Author
Ron Ellis, Ron Ellis Consulting LLC
Ron Ellis is a consultant specializing in color management, automation and workflow integration. An Idealliance G7 Expert, G7 Process Control Expert, G7 Expert Trainer, and chair of the GRACoL Committee, Ron has performed hundreds of G7 training and calibrations. He has conducting training and consulting for a wide range of customers in Europe, Asia, and North America. Well versed in ISO standards, he is certified as a PSA consultant as well as an FTA Flexo Level 2 Implementation Specialist, and was the primary developer of Idealliance’s G7 Process Control program, and is the G7 PC Master Trainer. Ron specializes in creating and implementing working spaces for brands and agencies that allow them to work more efficiently with vendors, saving both time and money.

ron@ronellisconsulting.com
www.ronellisconsulting.com
603.498.4553

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