

IN CONVERSATION CHRIS HEUSCH, FOUNDER OF ARCH

AS REPORTED BY DWAYNE SHRADER

ARCH Inc. opened its doors in 1996 as a consulting firm offering technical expertise to box makers who were trying to enter the then relatively new market of high-graphic direct print. Chris Heusch, President, Founder and principal consultant of the firm takes a look back at the beginning of ARCH and how the industry has changed in the last 25 years. Born and raised in Germany, Heusch's initial education and career was in finance. In 1987 he joined the family business, Dr. Lambotte & Schattenberg, ink makers of Bonn, Germany. Dr. Lambotte mostly served the packaging industries, with the main market being corrugated flexo direct print. Along with his father, Wim Heusch, he jointly managed the company for a number of years and expanded the international footprint to include key clientele throughout Europe, Africa and Australia.

Chris Heusch - a guest speaker at the AICC Digital Experience forum.



We work with box makers to bring their personnel on board with new equipment, technologies and best practice processes.

How has ARCH evolved over the past 25 years?

ARCH Inc. was founded as a consulting firm, offering technical expertise to family owned and managed producers of paperboard packaging in the Americas and Europe. In the beginning our main focus was on providing educational products for production personnel. That's still a key offering today as we work with box makers to bring their personnel on board with new equipment, technologies and best practice processes. Our capital equipment and general business consultancy engagements have grown over the years to a more prominent role, but education is still the main focus.

Who were your first clients and why did they retain you?

Wabash Fibre Box in Chicago, Tim Benecke, and Mid-Atlantic Packaging, Andy Pierson, were my first clients. I think they still squabble as to who was actually first. Wabash had just invested in a six-color Bobst flexo press. This was a big step and they were looking for help to get their production personnel educated not only on the equipment but on the new techniques and processes necessary to maximize the efficiency and profitability of this new market. They were also looking for help selling these new capabilities to their customers. Remember, this was a time when we were trying to change

Chris Heusch and Jim Nelson (AICC Design Committee Chairman) at the International Packaging Design Competition.



brand owners from litho to direct print high-graphics. Mid-Atlantic was well on its way to building their printing business on multiple rotary diecutters. They were looking to address some production issues and take their capabilities to the next level. Both Wabash and Mid-Atlantic remained loyal clients for many years. Even after Wabash was purchased by International Paper, Tim and I collaborated multiple times until his retirement last year from The Royal Group. The story is much the same with Andy and Mid-Atlantic, which was recently purchased by The Royal Group.

What was the state of direct print 25 years ago,?

There was perhaps more of a division in lines of thought regarding direct print. In Europe there was an early and strong following of off-line print. Bobst and Cuir, leaders in platen diecutting, in particular drove this development. The platen cutters had the major share of the market and Europeans were very comfortable with the process. So diecutting off-line with printing as a separate process seemed natural. In

the U.S., with a focus on efficiency, printing high-quality inline with the box making process, be that rotary diecutting or case making, was boosted primarily by Ward and United and later found ardent support by Göpfert. U.S. converters wanted to put a blank in the feeder and have a finished, high-quality print product at the delivery end.

At the time everything was gear driven and the mode of transfer was pull roll. Vacuum transfer was just starting to emerge and was creating a whole new set of obstacles with ink performance and sheet control. Deritend tried gripper chain transfer which was reminiscent of the gripper bars used by platen diecutters. Servo drive integration was just a pencil sketch in an engineer's note pad. We were experimenting with unusual and thin printing plate packages to control dot placement and growth. Everyone was experimenting with chambered doctor blade systems, and often with painful results. Wipe rolls were still prevalent and many suppliers were offering combinations of rolls and single or chambered blade systems. At this time most of the nips were still

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being set manually. So impression precision was dependent on the operator's finesse. The printing process was being approached more as a mechanical operation than the science and craft that we see it as today.

What mileposts in direct print on corrugated have you witnessed?

A big evolutionary step came in the 1990s when gear driven machines adapted a thinner undercut. The thinner plates significantly enhanced the control of ink transfer from the plate to the sheet. The addition of on-press drying systems also had a significant impact. First hot air – some which actually used gas for an open flame! We were daredevils back then – and then infrared, which enhanced the drying speed and subsequently the production speeds and the ability to diecut inline without offsetting and damaging the print.

Another evolution was the integration of vacuum transfer. That was not without a few experimental disasters, but once the kinks (quite literally) were worked out it had a considerable impact on quality, productivity and waste reduction. Now that we had positive sheet control, we could significantly reduce and in many cases eliminate trim, and warp was not the traumatic factor it once was.

However, clearly the biggest evolution has been servo drive and digitalization. Servo drive offered superior registration over gear driven machines. Gear train wear and play were no longer an issue. You could stretch or shrink your print area and maybe even run different plate thickness packages. Other digital tools came onto the scene including automatic registration and whole

sheet inspection systems, automatic ink control systems, automatic plate washers, fully automated anilox roll changers and more.

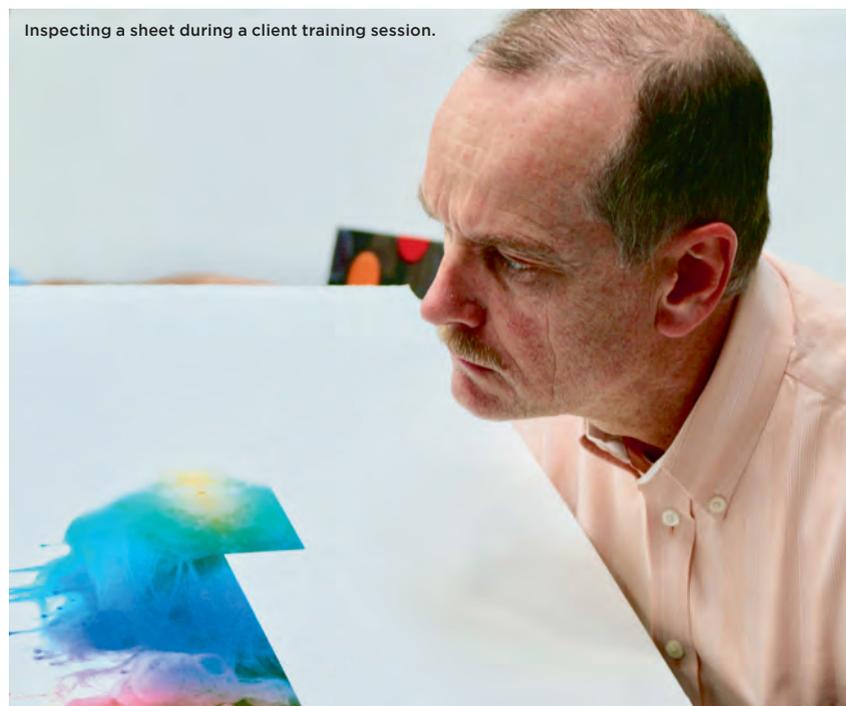
What are converters coming to you for today?

Education and training is still a big draw. What I'm teaching has evolved to keep pace with the technology. Equipment, processes and best practices are continually changing and we have to stay on top. However, the most common inquiries today regard process improvement. This can focus on the evaluation of a process, correct utilization of a piece of equipment, justification of new equipment purchases, or the recognition of the need to update tooling purchases. Automation is a major topic of discussion. Managers are looking to better leverage their key production

personnel. Automation is seen as a tool to enhance productivity, stabilize quality and reduce waste. The smart use of automation allows them to put the key personnel where they can be of greater value to the operation. The increased use of recycled paper is another issue facing converters. It's a different substrate with different characteristics and therefore reacts differently. There are proven adjustments that need to be made to inks, plates and tooling to obtain the best results. Even simply getting the board through the press, scoring, folding and gluing can change with recycled paper. And all of this can change depending on the amount of recycled fiber in the formula.

How has your role changed?

When ARCH was established, we set aside an annual budget of time and money for ongoing education. At the onset flexo printing and diecutting were our strong suits. This has expanded to enhancing the operations of laminators and specialty gluers as well as total material handling, plant



Inspecting a sheet during a client training session.

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automation, and corrugating. Our focus on communication skills and business management experience supports all of these.

What do you see as the future of digital printing? Will it ever be 'for everyone?'

We have watched the evolution of digital direct print on corrugated for 20 years now. It is now clear that inkjet printing has surpassed other digital printing technologies for our substrate. With single pass printing, the holy grail of speed and quality seems to be in reach. This will continue to make inroads into higher quality and shorter to medium run markets. First targets: litho label and flexo offline printing. However, the simple single color solution for faster inline machines is also becoming more common. Will digital inkjet replace flexo print? I don't think so, but it will gain solid market share over the next five and ten years. Will it ever be for everyone? I believe it already is in some sort of application. There are a wide range of digital options available today from single color units to print codes and cert stamps on an RSC, to a four-color medium resolution unit, to the 'Full Monte' for those looking to do high-end, multi-color graphics in a single pass.

Another advance in direct print is two-sided (inside/outside) printing. Will it remain a popular capability post pandemic?

Most certainly, direct-to-consumer product packaging is here to stay, and

Heusch says there is a range of options for digital print on corrugated, from simple single color to multi-color high graphics.



with that the unboxing experience. There are a wide range of inside print solutions. In a simple RSC one might see a one- or two-color repeat graphic of a company logo or assembly and use instructions. In more appealing diecut structures we see full graphics inside, sometimes utilizing lithographic print solutions. If this combines with multi-color printing outside it becomes rather unwieldy as a single pass solution. Are we going to build rotary diecutters with six inside and six outside print units? And then try and control all that? I don't think so. That is where two-sided print and digital print combine for more feasible answers. A digital press added to a box plant can give all sorts of inside and outside print solutions offline. As setup is less cumbersome, the separate machine pass may prove more viable than a lengthy setup of a 12-color monstrosity.

Other market trends?

The retail environment, which is the driver of printing in packaging, scatters into more channels today than it did 10 or 15 years ago. Grocery, club store, convenience, mass merchandiser, direct-to-consumer,

direct subscription, etc. This means there will be more and different packaging solutions required for print as well as structure. Run sizes will likely continue to be driven down, and concurrently product customization will increase. We're starting to hear a few murmurs, but when will digital cutting and creasing launch a serious effort? That's to be determined and certainly dependent on advances in technology.

What lasting effects do you think the pandemic may have on converters and the packaging industry?

The pandemic has accelerated trends we were aware of before. Online and home shopping was popular before, but their popularity skyrocketed during the pandemic. This also drove the need for a robust recycling structure. In my opinion these trends will not revert. The way we do business as an industry has also changed. Organizations are evaluating the changes they have made and are beginning to understand the impact it has had on their growth and bottom line. Many will likely adopt these changes as the new way of doing business. ■