

Responding to the Challenges in Label Converting

Andy Cook, managing director of FFEI, which premiered its digital UV inkjet Graphium press at Print 13 and Labelexpo Europe, discusses the trends and challenges in today's labels market.



Andy Cook,
FFEI Managing Director

Label converting is undergoing revolutionary changes that are challenging both the technological and financial sides of businesses. Digital printing has reset the expectations of print buyers in terms of quality, quantity and speed of delivery, sending shock waves along the whole length of the supply chain.

Understanding this brave new world is difficult for label converters faced with shorter runs, more SKUs, reduced lead times and the same demands for high quality printing and finishing. All of these things challenge machinery, workflow and business models, and put margins under great pressure. Demands for sustainability are

also part of the mix: Optimised use of materials, reduced waste, and energy savings are the obvious ones, but it extends into the realm of financial sustainability, too. Optimising customer services, ordering, billing and business systems, shipping and receiving logistics, are all key facets that paint the sustainability picture.

THE DIGITAL ALTERNATIVE. Some converters see the growing role of digital printing as a challenge rather than an opportunity. Handling reduced lead times and short runs digitally can be done profitably, and many leading converters are successfully integrating digital operations into their conventional production. Successful integration requires accepting that the digital press is not a cuckoo in the nest and an understanding of how a digital capability fits into the whole business.

To be truly effective, the digital press ideally needs to be able to print to the same colour and quality standards, and on the same substrates, as the analogue jobs. With this flexibility, decisions on which jobs should be run conventionally or digitally can be made on the basis of production requirements, not just run length.

For example, if a converter receives a particularly urgent job, it may make production sense to run it digitally, even though its run-length would ordinarily make it one for a flexo press. It may even be a financially viable decision if running it on the conventional press means disrupting production schedules.

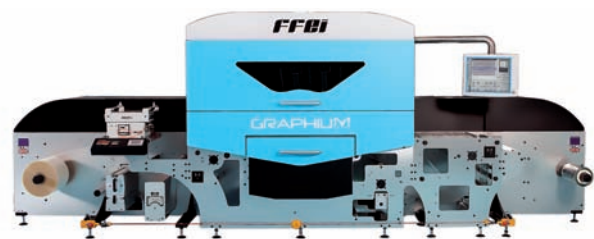
Taking account of the whole picture is part of the digital proposition, and that's what we tried to do when developing Graphium.

I believe that inkjet will become the dominant technology for

label converting. Its benefits of rapid job change-overs, high print quality, and substrate versatility mean that an extremely wide range of label jobs can be handled.

Graphium presses print CMYK and White at speeds up to 50m/min (1,230m²/hr) on a web up to 410 mm wide. Modular in design, Graphium's five digital printing modules can be configured with two pre-digital flexo stations and four inline flexo stations for hybrid production jobs. Optional inline finishing may be added for converting in one pass.

Graphium's white ink, Developed by FUJIFILM has excellent opacity, adhesion and light-fastness – important for label and flexible packaging converting – and with inkjet technology, extra colours don't slow down the press. Most standard self-adhesive label and packaging substrates from 50 – 250 microns can be printed including coated and uncoated papers as well as PVC, PE, PET, PP, OPP and metalised materials. Non-digital media may also be printed using the corona treatment that's standard in Graphium. Inter colour pinning and FFEI Adaptive Screening Technology also ensure dot quality delivers high-quality results that integrate with conventionally produced labels and packaging.



Bildunterschrift: FFEI Graphium

Digital UV-curable inkjet printing offers converters a solution that addresses challenges throughout businesses with versatility, speed, sustainability and quality to meet the requirements of today's market.

1. You say that inkjet will become the dominant technology for label converting while discussing the benefits of digital UV-curable inkjet printing. However, cost is not mentioned. What are the costs involved and is this cost-effective in comparison to other types of printing? And, in some areas like food packaging, UV-inks are not very «welcome». How do you solve this problem? Digital label printing has been shown to be cost-

effective. The advantages of printing what you want, when you want it, along with the significant waste reductions, reduced warehousing and logistics costs reduce the significance of any difference between different digital technologies. At this stage of the transition from conventional to digital printing, the base-line continues to be the profitability of printing conventionally. Falling run lengths make digital not only an affordable option, but a profitable one. In terms of digital technologies, UV printing does not require varnish or primer, so the cost savings are significant compared to toner. UV printing is also more resistant to scratches, wear and tear, and sun exposure than its traditional printing counterparts.

With regard UV-ink and food packaging and labelling, UV-ink is highly stable and much work is being done by the suppliers of the ink used in the FFEI Graphium press on very low migration inks for direct food contact use. There are also many opportunities for print service providers to use UV-curable inks for foodstuff packaging where the materials and substrates provide barriers to migration, as well as for applications where this is not an issue.

2. What are some possible disadvantages of digital inkjet printing? The main disadvantage is the cost of ink for very long print runs.

3. Why not digital inkjet with water-based inks? Using UV-curable ink in the Graphium press was a strategic decision. It was based on print quality, market opportunity and the range of substrates that UV-curable ink can be used with. We were looking at broader markets than food packaging – which as noted above, is not closed to Graphium users – and at those markets that were being affected by changes in demand (shorter runs, variable data, short-turnaround times, etc.). We also looked at the best way to integrate conventionally printed products with those done on FFEI Graphium presses and UV-inks fit that requirement. Graphium is built on flexibility – UV-curable inks offer our customers a very broad range of substrates in comparison to water-based inks.

4. Will digital printing become the future of label converting or do you think it will be competing with flexo printing for years to come? Digital printing offers print service providers and brand managers another way of addressing their requirements. There

will always be mass-market products which are very high volume and price sensitive for which conventional production will remain the best option. Digital production adds value whether through the speed of deliveries possible or, the use of variable data to drive sales, short-runs, etc. These advantages are being developed by brands to add value to their products. It's not going to be a case of either/or in the near or mid-term, but the ability to deliver what customers want, when they want it.

5. What impact do you think future technology will have on the development of the Graphium press? What developments do you see for the Graphium press in the future? At last year's Labbelexpo, we saw an explosion of new entrants and products offering inkjet technologies for printing labels & packaging. It is clear that not only has the technology passed the tipping point, but the market has developed a momentum for adopting it.

In recent years, FFEI has invested millions of pounds into the development of its inkjet technologies and accumulated many years' experience in overcoming the challenges and creating unique benefits for our customers. Along with this investment, we have seen the creation of significant and valuable partnerships with FUJIFILM, Xaar and more recently Edale. The combined know-how of these four companies give us one of the most powerful collaborative teams in the industry today, all with research and development teams based in the UK.

We are on a mission to really change the way people view and use the technology. We see many new opportunities for converting traditionally printed applications to inkjet digital. The potential in this technology to evolve is huge and inkjet technology in a narrow-web format is really just starting to push the boundaries of what's possible to print.

With our Graphium solution, FFEI is investing heavily in R&D to ensure the overall benefits of the Inkjet digital print engine can be maximised. To this end, we will continue to add & enhance workflow software products, like our RealPro Toolkit & Workflow solutions, in the future. Our main developments will focus on providing solutions that help customers operate in print markets and offering them a sustainable business moving forward. For FFEI, packaging, labelling and specialty print sectors are key to our product focus. ↙

FFEI Ltd., UK-HP2 7DF Hemel Hempstead
www.ffe.co.uk



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D-48683 Ahaus
Telefon: +49(0)2561 · 9385-0
Telefax: +49(0)2561 · 9385-500
info@ahauser.com
www.ahauser.com

