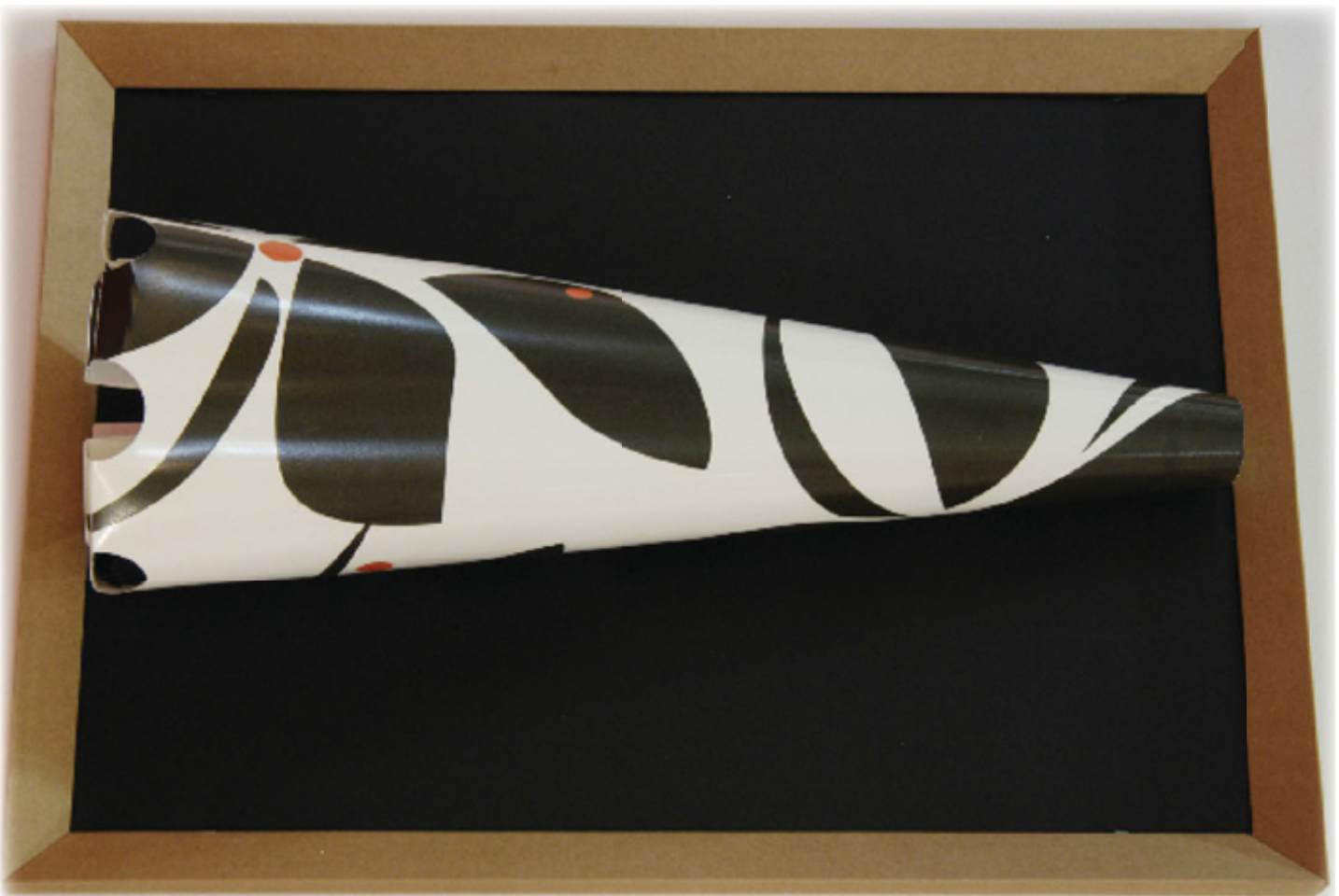




UV-Cured Wide Format Printers

Exhibited at Visual Communications,
Milan, Italy, November 2005



Introduction	1
Water-based Inkjet Printers	1
Encad	1
Epson	1
HP	1
Canon	1
UV Printers	2
Label Printers	2
Textile Printers	2
Calendering Machines for dye sublimation of textiles	3
Printers for Corrugated Packing Material	3
Observations	4
UV Printers in more Detail	4
ColorSpan	4
Dilli	4
Durst	5
Flora	6
Gandinnovations	6
Gerber/Spandex	6
Grapo	7
Inca Spyder 320	7
L&P	7
Neolt	7
NUR	7
Scitex Vision	8
Vutek	8
Zund	9
Acknowledgements	

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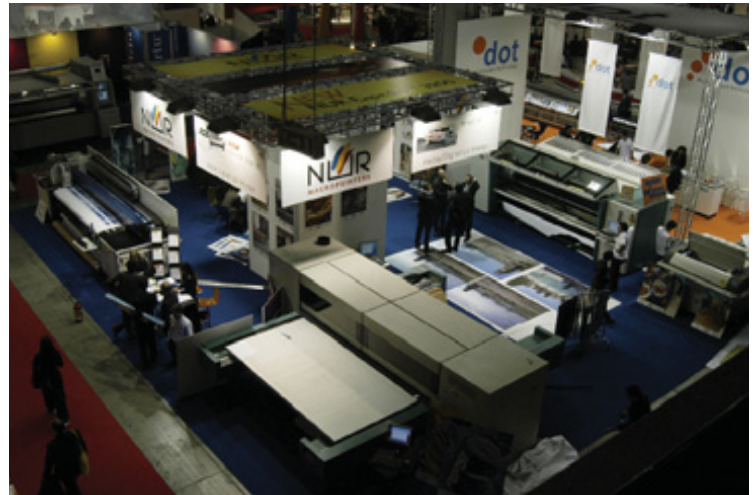
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Introduction

Two FLAAR Reports cover the Milan sign show: one on solvent ink printers and this present one that features UV and also mentions all the other types of printers.

Since I attended the IMI technical conferences on UV-cured inkjet in Lisbon, I was a day late, and arrived only on the evening of the first day. Fortunately trade shows in Italy are open late.



Water-based Inkjet Printers

Encad itself appears to be vanishing as Kodak attempts to put the Kodak logo on all its acquisitions; so there was no Encad booth. But there was no Kodak booth either. I saw only a single Encad 1000i printer, rebranded as the Kodak 1200 (identical to the old Encad; just a different name and different RIP software).

Epson had a modest booth; subdued in design. The Epson booth at Photokina was spectacular in distinction. The Epson booth in America tends also to be attractively done. All the more reason for me to be surprised at the Epson Italy booth. It was not the cult center for photographers and giclee artists as are the Epson booths in German and American trade shows. Probably fine art photography and giclee is not such a huge and growing market in Italy. In the US this market is primarily fueled by prosumers, artists who are artists as a second business, or retirement business. Thus in America they have money to buy Epson printers, Epson inks, and Epson media.

What was interesting was that Epson Italy now lists CAD-GIS as one of its targets. I guess if you have a lack-luster fine art and giclee business, you have to turn to something else.

The Epson model numbers were different in Italy than I have seen elsewhere.

The Epson 7400 and 9400 have dual sets of CMYK instead of multiple blacks or light cyan, light magenta. They must be desperate for making the printer less slow by doing two of each color. Yet this sacrifices the very thing that Epson is good at: color for photos and giclee.

The Epson 4400 seems to have only one set of CMYK. Yikes: no wonder they were trying to sell this for printing on cardboard packaging. CMYK sure is not enough for fine art photos or giclee.

The **HP** booth was what is typical for this large corporation: it was "corporate," The booth had no focus on applications. The nice HP printers were simply displayed. In distinction the Epson booth at least had each application neatly described and illustrated. But the Epson Italy booth had none of the excitement of an Epson USA booth. And the Epson Germany booth was the largest and most spectacular of any Epson exhibit I have seen in any country. We even issued a separate report on it: an entire FLAAR Report on one booth.

The best of these booths was by **Canon**. It is rare for Canon to exhibit outside of its camera division, but the Canon Italy booth had printers everywhere. And the Canon booth was cleverly focused on applications. Canon is clearly after the

- Corporate market; for workgroups and in-house printing.
- Fine Art
- Photographic (as you would expect of a giant camera company).
- CAD-GIS (technical drawings)

Canon even had a wide-format scanner to emphasize its interest in taking over the technical market.

On the subject of targeting applications, Epson Italy is featuring CAD/GIS and packaging, in addition to photo and fine art.

UV Printers

I believe one or two other UV printers from China may have been present that we did not get photographs of. Since booths were by distributor's names, and not always the brand name of the manufacturer, it was hard to keep track of where to find printers you are looking for.

I saw

- ColorSpan 72UVX
- Dilli / D.G.I., via Reklan
- Durst Rhopac
- Durst 350R, new and Durst Rhopac; the Durst 600 was not shown
- Flora 1800 UV flatbed, the Chinese original for Raster Printers 720 in the US
- Gandinnovations Jeti UV flatbed
- Gerber Solara UV2, in the booth of Spandex
- Grapo Octopus X4, via Uni-Link
- Inca Spyder 320
- L&P Virtu, branded as the Spühl in Europe (their distributor for Europe)
- Neolt
- NUR Tempo
- NUR Expedio 3200 (a new 8 color version)
- Scitex Vision VEEjet+
- Vutek, two models were shown; one in the Vutek booth; another model elsewhere.

There was no Agfa booth at all. The Mutoh version of their joint-project UV flatbed printer has not been shown since FESPA, which suggests it is still in experimental stage (alpha stage, which is before even beta testing stage). Several solvent ink flatbed printers were shown, and a few flatbed printers for textiles.

Label Printers

Summa manages to hang in. Their DC3 uses thermal transfer technology to produce continuous tone. As long as it does not try to print photographs, the Summa printer produces nice quality for spot colors. The Summa DC3 would be competition primarily for the smaller Roland printers and Gerber Edge.

Textile Printers

DuPont showed its Artistri, using direct-to-cloth sublimation. This still requires a calendering machine (a heat press) but does not need printing on an intermediate transfer paper.

d-gen (a Korean company that is strong in Europe) showed its retro-fitted Roland printers that handle textiles. You can use

- disperse dye ink (dye sub ink) for polyester fabrics
- pigmented ink, but materials have to be pre-coated
- acid dye ink, again, materials have to be pre-coated, which is expensive.
- Reactive dye ink, pre-coating required.

Reactive dye prints on

- Cotton
- Linen
- Tencel
- Silk (especially coated for reactive dye ink)
- Wool (especially coated for reactive dye ink)

Acid dye prints on

- Silk
- Wool
- Nylon

Pigmented ink prints on

- Cotton
- Linen
- Tencel
- Silk
- Wool
- Polyester
- Nylon
- Acryl

The results they show are gorgeous. Just realize that some fabrics require post-treating: washing and especially steaming.

Several other booths had predominantly retro-fitted Roland printers producing inkjet textiles.

Mutoh showed their textile version of their Viper printer.

Mimaki is a leader in textile printers that are not merely retrofitted by after-market resellers. Mimaki designs their own textile printers.

I did not notice Stork; although Stork still exists as a company and printer (rebranded Mimaki and other models), Stork has been nudged aside by d-gen, other rebranded Roland printers and by Mimaki itself.

Calendering Machines for dye sublimation of textiles

I noticed two calendering machines; there were probably more. The two were: the Dutch company, Klieverik, that makes the calendering machine that works with the Gandinnovations direct dye sub. The other was from Creative Graphic Technologies.

Printers for Corrugated Packing Materials

This is a special category, since the most popular printer for printing on packaging uses neither a solvent ink nor a UV-cured ink system. The Scitex Vision CORjet uses Aprion printhead technology, which is neither a normal piezo head nor a traditional thermal head. Not much is explained about the Aprion printhead technology at either IMI or The Tiara Group conferences, so the underlying technology is not well known within the industry. Of course now with HP's billion-dollar R&D budget available, the Aprion printhead technology will make further strides.

The CORjet is a huge printer and was not physically present in the Scitex Vision booth. Instead they had a special showing of the CORjet a dozen kilometers outside of town. They had the CORjet combined with additional equipment from Esko-Graphics.

Observations

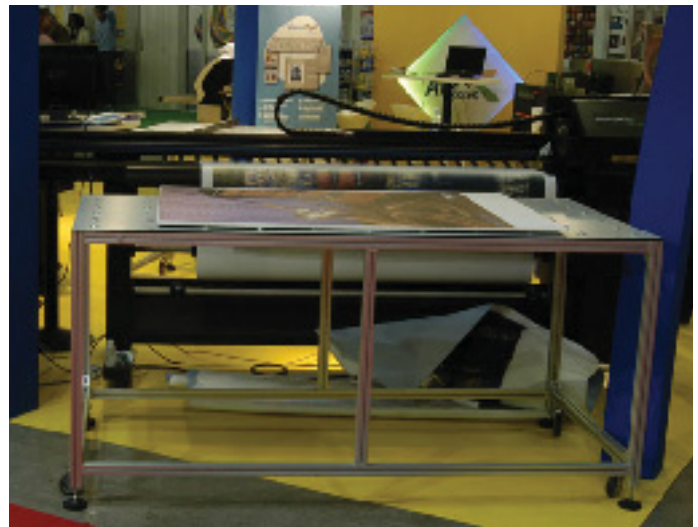
Visual Communication '05 was held from 10 through 12 November. One advantage of a venue in Italy is that the trade show stayed open late, at least on the first two nights. This trade show mixes screenprinting with inkjet printing as well as signage in general (neon, laser engraving, etc). So the coverage is comparable to SGIA to some degree. FESPA is a larger trade show because it is international. But for a regional show, the Milan event was not as tiny as are some of the regional shows in the US.

Milan is a nice place to visit but I had no time even to see the famous Gothic church; the trade show center is not in that part of the city center. If you do go to Milan, it is worth getting a look at the front façade of the Central (train) Station. This is the one of the largest trade station façades in the world. In true Fascist style: the facade is a mishmash of every Imperial style from the Romans back and forth. This station would be a great final exam for any art history course, to guess which part of which ancient buildings were copied by which parts of the train station façade.

Visual Communications shows in Milan, Düsseldorf, Paris and elsewhere in Europe are organized by Reed Exhibitions. Unfortunately they do not provide adequate facilities for the press; for example, there is no printer in the press room, and no courtesy Internet access. This is deficient when compared with all the facilities that Photokina and DRUPA provide for the press.

UV Printers in more Detail

I did not notice Eastech, but some of the booths of distributors were so filled with Italian students that it was hard to see each and every printer deep inside a booth. Eastech had been at VisCom Düsseldorf and FESPA both.



ColorSpan

ColorSpan

Two booths displayed a modest presence of ColorSpan: Oce and atp. The ColorSpan 72uvx is now the fastest selling UV-curable ink flatbed in the world. A printshop in Toledo, near our university in Ohio, already has a Durst Rho but last week they bought a ColorSpan because they got a huge job order and their one Rho can't produce enough. So they will continue using the Rho, but will add the ColorSpan 72uvx for the overload. Previously they had an early version of the Zünd 215, but got tired of the quirks of the Xaar printheads and other deficiencies of the Zünd at that date (circa 2002, the printer was still not really fully finished; today the current model of the Zünd is improved, but costs more than twice the price of a ColorSpan).

Dilli

Dilli and D.G.I. are parts of the same basic company. In some trade shows Dilli and D.G.I. each have separate booths. Here in Milan there was no Dilli or D.G.I. manufacturer's booth: instead they were shown in the area of a general distributor. One of the Neo UV-curable ink printers was shown.

Durst

Since Durst is an Italian company (albeit with its factory over the border in adjacent Lienz, Austria) it is logical that Durst had a presence at this Italian trade show. Durst took this opportunity to introduce its new model 350R. R stands for roll-to-roll. After the NUR Expedio (introduced at DRUPA 2004), this is the first grand format roll-only UV-curable ink printer. Having a top tier player such as Durst introduce a roll-only UV printer will certify this market application and serve notice to Scitex Vision, Oce, Gandinnovations, and especially to Inca and their sort of partner Sericol, that a dedicated roll-to-roll technology may be crucial to survival in the high-end marketplace.

The second salvo that this Durst printer sent through the industry was the surprising innovation of using cationic chemistry for its UV-curable technology, as opposed to the free-radical photoinitiators used in 99% of the other UV-curable ink printers.

A third innovation was featuring textiles as an application for this UV-curable ink chemistry. Just 48 hours prior to this introduction, the leading industry guru for inkjet textiles made a special point of stressing that UV-curable inks would have no immediate or long-term impact on the printing of textiles. Since the owner of two ColorSpan UV printers had just finished telling me how much of a market he had for UV-printed textiles, I was tempted to stand up in the IMI meeting and correct the guru, but I did not want to embarrass him in front of 120 industry managers and CEOs.

Although there are plenty of other ways to print on textiles, especially seen in the exhibits at VisCom Milan and FESPA 2005, if you don't want to poison your shop environment and give all your workers carcinogenic solvent ink chemicals for breakfast and lunch, then UV-cured ink may be one alternative.

Durst had their spacious exhibit area divided into two: the left half was devoted to their Rhopac, which we first saw at FESPA earlier this year. The back wall was a separate exhibit of a wide range of applications, mostly probably printed by the Rhopac.



Dilli



Durst Rho350R



Flora 1800

Then the other half of the exhibit space was dedicated to the new model 350R. It was printing the entire time, so this is clearly long ago out of alpha stage. Many of the Chinese UV printers are barely out of beta stage.

FLAAR now has four Reports on Durst UV printers.

Flora

Through an Italian distributor Flora exhibited its model 1800 UV flatbed. The Flora 1800 is the Chinese original behind the Raster Printers RP-720 clone in the US. The UV flatbed in the booth the Mitsuma UV-180 in the printed catalog handed out at the booth.

Gandinnovations Jeti UV flatbed

The Gandinnovations UV flatbed was printing every day. Since we spent 5 days with this printer at VisCom Düsseldorf, I did not feel the need to take more notes. FLAAR already has two different reports on this UV-curable ink flatbed: one is a general evaluation; the other is a site-visit case study.

Gerber / Spandex

Since SGIA did not happen in New Orleans in October, the world premier for the Gerber Solara UV2, was in the booth of Spandex here in Milan. The UV2 is a hybrid flatbed version of the original Solara. The printer can now take materials up to 1.3 cm thick (about half an inch if my aging mathematical abilities are still working). So this printer is now competition for the RP-720 (Raster Printers version of the Flora 1800) and competition for the ColorSpan 72UVX.

The crucial spec will be speed, reliability, and tech support: which of these three printers is speedy? Which may have tech support issues? And which of these printers will hold up to daily use?

That's why we have the handy FLAAR Reports: two issues on the ColorSpan; one on the Gerber; one on the Flora; one on the Raster Printers 720-UV. We even offer a discount if all are ordered together.



Gandinnovations Jeti UV flatbed

was labeled



Gerber Solara



Grapo Octopus

Grapo

Their Octopus X4 was exhibited via Uni-Link. The Octopus is for Europe what the Raster Printers RP-720UV is for the US: its entry-level printer. The difference is that the Grapo Octopus X4 is a second generation printer, designed and manufactured in Europe. This is not a Chinese printer.

The main competition for the Grapo Octopus would be the ColorSpan 72UVX.

Inca Spyder 320

This innovative dedicated flatbed printer was in the booth of ImasGrafica. A dedicated flatbed printer has advantages: the materials don't skip, stutter, skew, or otherwise get banding because of poor movement.

L&P

Spühl is the European distributor for the L&P Virtu.

NEOLT

Neolt is more than a manufacturer of a UV-cured ink flatbed printer. Neolt is the Italian distributor of many major brands of solvent ink and other consumables. In the US Neolt is known primarily for its cutters (trimmers for finishing prints).

The Neolt UV-curable ink printer comes in three sizes. We have inspected this printer at its US debut (SGIA 2004), then we took additional notes at FESPA 2005, VisCom Düsseldorf 2005, and saw it again in Milan. So our FLAAR Reports is now a third or fourth generation report.

NUR

NUR had their Tempo on exhibit. We also got to undertake a quick site-visit case study of the NUR Tempo outside Milan. The rather unsettling information we received has been added to our site-visit case study.



Inca Spyder 320



L&P

printers and



Neolt

Scitex Vision

It is rare for the Scitex Vision to exhibit their VEEjet+ at a trade show, but there it was. Perhaps this is in honor of the fact it is descended from what may have been the first UV printer ever conceived, the Sias Digital, an Italian printer. Although the Durst Rho 160 is better known (because Sias Digital did not succeed commercially), the Sias was one of the earlier UV inkjet technologies. It was bought by Scitex Vision and became the origin of their VEEjet.

Vutek

Two stands had Vutek printers: the model 300 was displayed in Vutek's own booth. The model 200 was in a nearby booth; I am assuming it was a reseller or distributor. The different company names in Italy are confusing. In Europe almost every country has its own individual companies. It is hard to figure out which is the distributor, which is a reseller, and whether the manufacturer has a local corporate presence as well, or not.

Zünd

The Zünd booth showed only their XY cutters, which are an industry legend for Swiss quality. The Zünd 215 UV-curable ink flatbed printer was shown in an adjacent booth. At DRUPA 2004, Zünd showed the model 215, a new XY-flat, and a new model 250. The XY-flat model must not have functioned adequately (it tried to run UV inks through Epson printheads). This model was cancelled. The model 250 was in the quarter-million dollar+ range. It was in gestation for a year; the first models that were sold turned out to be unacceptable, so the printer was taken off the market and will be relaunched after mid-2006. The model 215 is doing okay and is readily available. Just be sure you get the current iteration. One person said he had been offered an earlier version of the 215 for a really low price; the absolute latest version is okay; earlier versions are iffy, even at a low price, because for an even lower price you can buy a Gerber or ColorSpan.

Last month a client came to our university. He wanted to learn from us what printer to use for his needs. On his own he had taken his



NUR



Scitex Vision VEEjet



Zünd

samples to Zünd, Mastermind, and other companies. The print by the Mastermind was the best (solvent ink flatbed, but required a primer). The print from the Zünd was the worst, both poor color gamut, unacceptable amount of horizontal banding defects, and the image was simply not adequately imaged when you saw it next to the same image printed by other machines. So don't blame us; this was an independent test by an outside company that simply wanted to find the best printer for their materials.

The reason Zünd became the #1 best selling UV printer was because in 2000-2003 the only options were a \$300,000 Durst, Vutek, or \$500,000 Inca. Today, 2005, there are over 50 models to choose from, albeit most start at \$200,000 and up. But today there are plenty of printers at the price of Zünd or below: Grapo, NEOLT, ColorSpan, and several Chinese printers.

The unfinished Zünd model 250 uses Spectra heads (the 215 uses Xaar heads, which is one main reason why it has issues with poor image quality). So once the glitches of the model 250 are rectified, it should produce admirable quality.

Acknowledgements

I thank Materia Griega, a trade magazine publisher with magazines for the Italian, Greek, and Balkans region. They kindly provided a nice hotel, hospitality in their booth, and a fancy evening meal in full Italian style every night, plus introductions to key personalities in the Italian and Greek wide format printing scene.

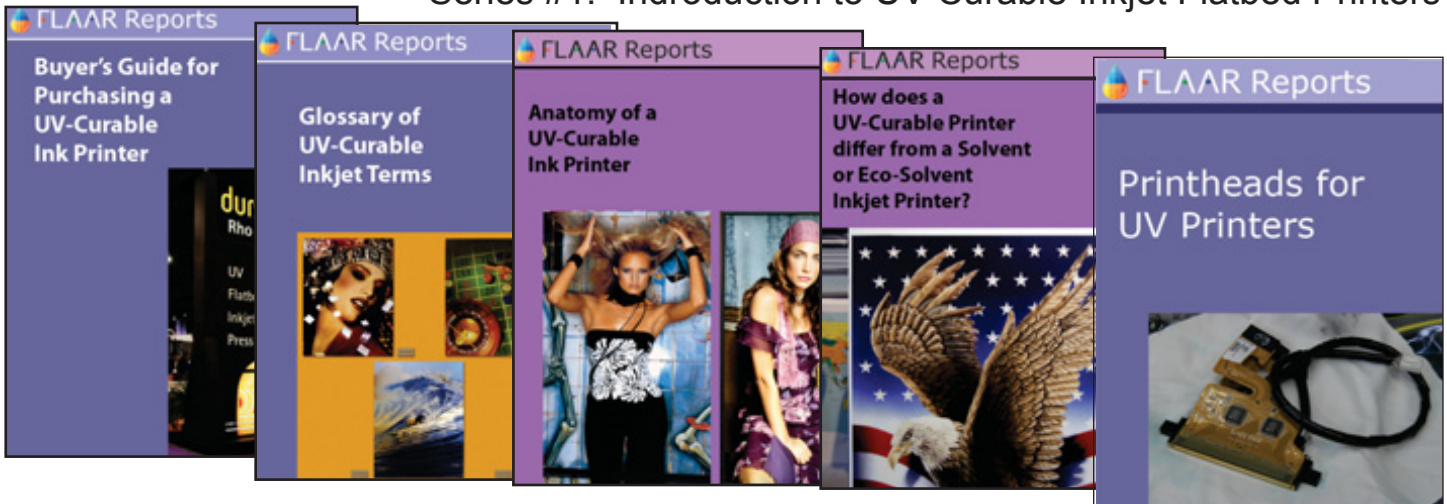
Materia Griega is planning several workshops, one in January in Athens; another in Amsterdam in May, as part of the FESPA digital event.

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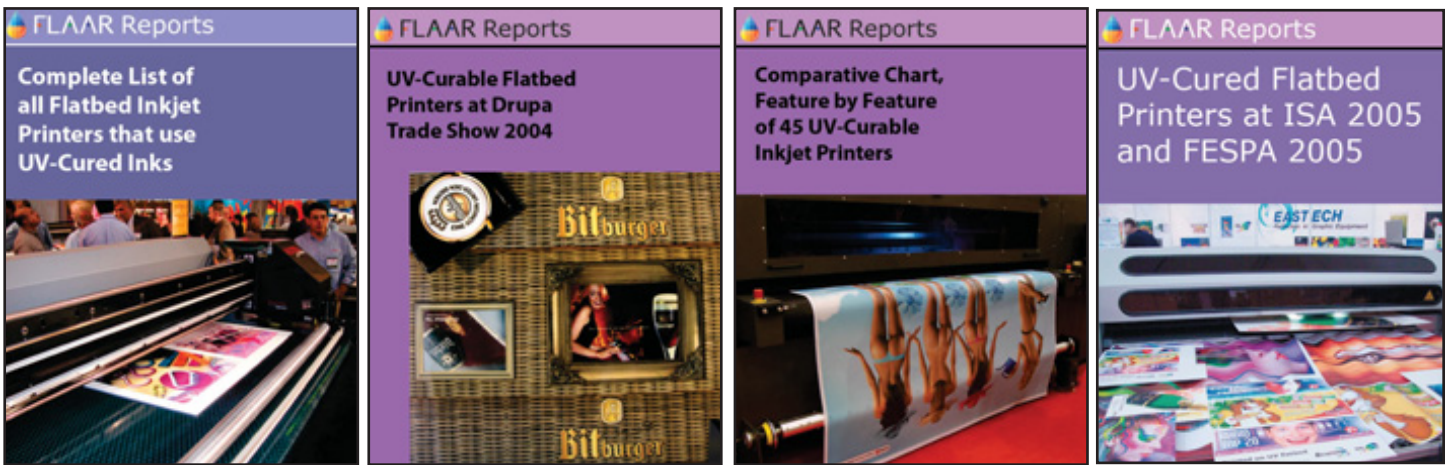


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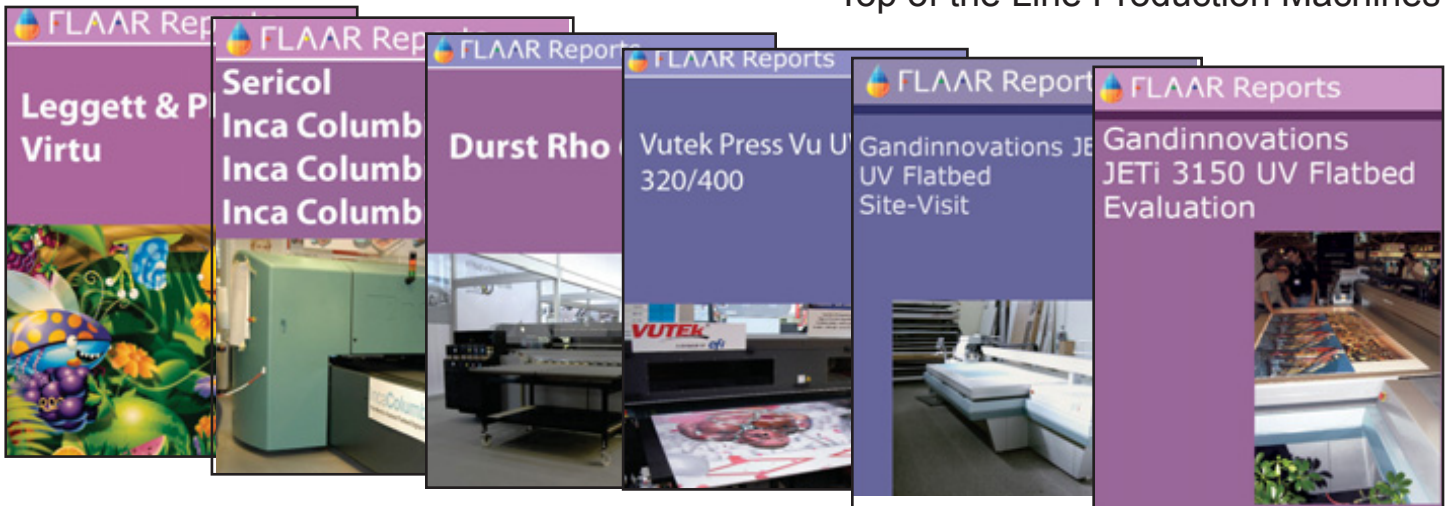


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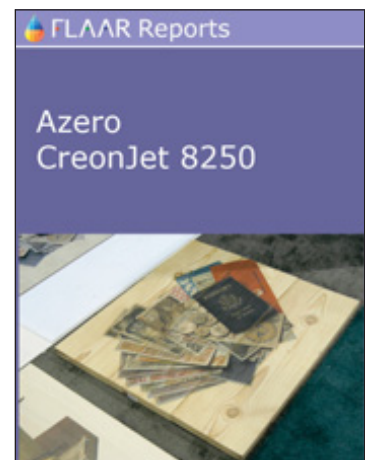
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