

2012: Another, different inkjet-drupa

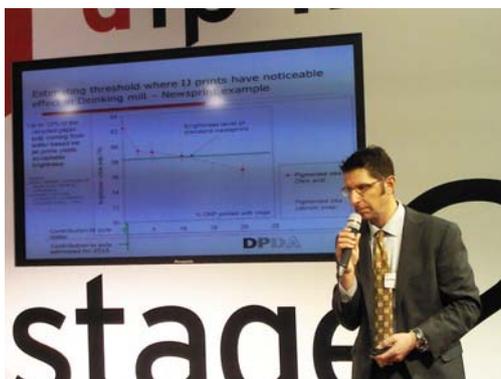
Recyclability becomes an important marketing tool for printers

There is something about **Benny Landa**. And his marketing people have done a great job. Though not a single print can be touched and though his new printers will not be available for the next 18 months, the careful logistics of dropping pieces of news step by step before drupa have their effect: The shows in a giant theatre in hall 9 are booked out, crowds flock around the reception desk with the large screen above to get a glimpse guru's presentation.

Inside, Benny Landa several times a day sends his message to the devoted audience. Komori, Heidelberg and manroland are already his strategic partners. The show reminds one of Steve Jobs presenting a new iPhone – and actually one feature of the machines simply called Landa is the biggest touchscreen ever covering the front of the printer, displaying all available information about print job and printer. But that is not what the hype is about. The magic word is 'nano'. The website is landanano.com, the technology is called nanography. That sounds progressive, innovative. And Landa has ambitious targets: All print jobs up to and above 10,000 copies to be printed cheaper, on any matrix and – another magic buzzword: green.

How green will nanoink be? Nobody can answer this question without having a sample. The technology is close to Indigo (remember: Benny Landa in-

vented Indigo in 1993 and sold it successfully to HP later) but with a different ink. Water based ink claimed to be of nanoparticles (which would not be much different from many other inks) is jetted towards a heated carrier, the



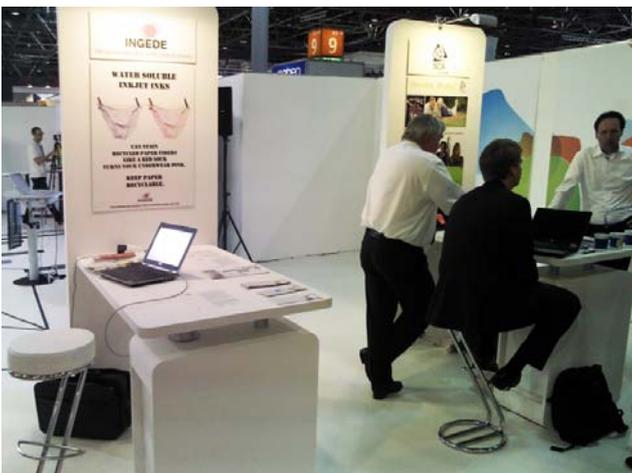
On behalf of DPDA, Nils Miller (HP) and Michael Has (Canon/Océ) presented the inkjetters' view on paper recycling at drupa: No problems up to ten percent, they claim, and many years to go ...

water evaporates, leaving a 500 nm ink film that then is transferred to the paper or any other substrate. Unlike water based inkjet, there is no bleeding into the fibre network – a nano-Landa in the show walked through fibres in an animation with an umbrella to illustrate the advantage compared to an inkjet shower (picture © Landa Corp.).



The British newspaper "Guardian" hails Landa "a printing revolution that could be as significant as Gutenberg" – together with a new liquid toner process announced by *Xeikon*: Here other than in Indigo's liquid

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Within the sustainability network *Media Mundo*, INGEDE had a small but highly frequented stand at their drupa booth and gave two presentations about deinking and problems with water based inkjet inks.

CALENDAR OF EVENTS

19 June 2012

INGEDE Project 137 12
"Varnishes - hickies"
Darstadt, Germany

26–28 June 2012

Zellcheming Expo
Visit us at booth 321!
Wiesbaden, Germany

28 June 2012

INGEDE Project 135 11
"Adsorption Deinking"
Wiesbaden, Germany

9–13 Sep 2012

NIP 28
Quebec, Canada

14 June 2012

Kick-off: INGEDE Project 138 12
"Monitoring of varnished printed products with NIR spectroscopy"
Heidenau, Germany



We have set up an INGEDE group "Members & Officials" in the social network LinkedIn! If you are an INGEDE member, please join our group! www.linkedin.com Please register and establish contact with either Andreas Faul or Marion Klabunde.

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toner process, a polyester based ink layer is being formed that is “safe to wash down the kitchen sink” and is as good deinkable as dry toner (see press release below). According to Xeiikon, with this new “Trillium” printer for the first time cost, quality, and speed requirements can all three be matched by a digital printer where today always one had to be sacrificed in favour of the others. This technology can speed up the change in the printing industry from analog to digital – just as Landa claims it.

„Fully de-inkable and recyclable prints“ – claims based on INGEDE’s certifications have become attractive for exhibitors like Xeiikon.

But drupa was more – Xerox presented the water-



less inkjet system CiPress 500 producing good deinkable prints, HP a whole range of new and larger Indigo printers, challenging the recycling process even further. Fujifilm emphasized the deinkability of the JetPress 720, and Ricoh of their dry toner printers while a press release of Ricoh USA on behalf of DPDA incorrectly assumes that all their inkjet prints “can be deinked without causing an environmental issue”.

Axel Fischer

INGEDE Press Release at drupa:

Deinkable Liquid Toner, Deinkable Inkjet: New Recycling Friendly Developments

What makes a digital print sustainable? No, not if the printer uses **water-based inks** – on the contrary, nearly all products printed with water-based inks currently create severe problems in the recycling process: When a paper mill wants to remove the ink (to deink the paper) in order to produce new, bright paper, dyes and small pigments **cannot be removed**. The result: paper fibres become grey; the mill struggles to achieve the required quality. Especially dye based inks will colour the pulp in small amounts – like a single red sock turns a whole wash load pink. But now **new options** are in sight to make inkjet inks better deinkable.

Liquid toner has also been a major challenge for paper recycling. **HP Indigo prints** have been the first digitally print products to **cause severe damage** in a paper mill. In 2010, more than 100,000 Euro damage occurred after photobook overprint speckled almost eight hours production of high quality recycled paper. Since then, Indigo overprint is banned from the graphic paper recycling stream; it has to be collected and processed separately.

A **new liquid toner technology** presented at drupa using a different polymer system seems to work much better: First deinking results from Xeiikon’s Quantum technology show results in the **same range as dry toner**. As soon as they are available, INGEDE will per-

form tests with typical production prints.

On the way towards deinkable inkjet inks

Also inkjet prints can become deinkable – this has been shown within a cooperation of INGEDE with the Austrian

size and surface properties for the deinking process. The first laboratory test with these inks **on uncoated newsprint** without further optimisation already led to deinkable prints. Since then the ink has been improved for newspaper printing, a first printer to be presented will take until later this year.

Currently **only a few special systems** for water-based inkjet deliver prints that do not create problems: They either use a **specially coated paper** that absorbs the ink, **or a pre-coating** of the paper during the printing process to ensure instant coagulation of the pigmented ink particles (Fujifilm’s JetPress 720). Of the dye based inks, that is most of the current market, none can be deinked in the production of recycled paper today.

Preliminary tests with HP’s inkjet inks of the next generation introduced at drupa showed promising results on certain papers. As the tests have been performed with simplex prints and a low coverage only, they have to be confirmed with more typical prints as soon as these inks are being used in the field.

Dry toner and solid ink remain good deinkable

With a total of about 40 certificates for deinkability issued today, INGEDE sees dry toner and solid ink (non-aqueous inkjet) to be good deinkable generally independent from the paper used.

WATER SOLUBLE INKJET INKS



CAN STAIN RECYCLED PAPER FIBERS LIKE A RED SOCK TURNS YOUR UNDERWEAR PINK.

KEEP PAPER RECYCLABLE.



YOUR SUPPLIERS FOR NEWSPRINT, OFFICE- AND HYGIENE PAPERS, RECYCLED.

inkjet specialist SEPIAX. There, researchers have developed **resin coated pigment particles** that can be dispersed in water just like standard pigments; but after printing stick steadily on different surfaces – and **can be removed** from paper printed with them. The pigment particles agglomerate to form aggregates that have the right



INGEDE Working Group Paper for Recycling: Meeting in Perlen

Adapted to the new wording at European level the working group changed its name from “Recovered Paper Quality” to “Paper for Recycling” officially at the last meeting at Perlen Papier on 17 and 18 April 2012. The meeting was held in combination with INGEDE’s second working group “Deinking Process” (see also INGEDE News April 2012). The group got an insight view of the Swiss market for paper for recycling and special solutions in logistics. Railway transportation for short and long distances is generally applied. Beyond that a mill tour through the storage for paper for recycling, the deinking plant and the new paper machine showed us the high level of paper making in Switzerland. In the meeting Andreas Faul presented the first results of the annual questionnaire for

2011. The INGEDE Office already received 19 feedbacks which is close to the maximum we ever had. Thanks to the active members! Waiting for some more replies and after fine-tuning of the data we can soon expect the distribution of the final version.

Further topics on the agenda were the description of unwanted papers as well as the state of online quality controls and its applicability in sorting plants and paper mills. Two technological projects were discussed, a) about effects of impurities and b) about mineral oil migration. Finally the group discussed intensively the latest experiences on entry inspection, problems which occurred and changes which could be observed. The next meeting will take place in Grand-Couronne (France) at UPM’s mill Chapelle Darblay on 27–28 November 2012. The next spring meeting is dated for 16–17 April, 2013.



Manfred Geistbeck

IZP – Initiative Zukunft Papier *A newly formed association in Eastern Germany*

see also News March 2012

The high quality of paper recycling in Germany is jeopardized!

A new law on recycling cycles (Kreislaufwirtschaftsgesetz) in Germany becoming effective in June 2012 may

found the IZP.

About a dozen foundation members have elected the IZP board consisting of Klaus Große (Stora Enso Sachsen, Eilenburg) Ronny Börner (repaper, Zwenkau), Rene Schiebold (vice

you can also find an entry form.

Every member of the paper value chain, e.g. paper mills, printing shops, publishers, press distributors and retailers, single citizens or associations, schools etc., environmental



IZP Board Members, from left to right Klaus Große, Ronny Börner, Rene Schiebold, Peter Meißner

destroy existing structures of collection by preventing the competition. To keep the successful collection system alive, a group of companies along the paper value chain decided to

chairman Papiermännchen, Leipzig) and Peter Meißner (chairman, MAD München, Krostitz). Shortly all relevant information will be available on the homepage of the association. There

organizations, traders of paper for recycling and operators of collection points can join this initiative.

Marion Klabunde