7th meeting of the Digital Round Table in Gent

Understanding how ink goes off the paper; 7th meeting of the Digital Round Table in Gent

The effort in increasing the mutual understanding is a slow but rewarding process. The Digital Round Table on March 20 in Gent, being the 7th meeting of this kind, still had a couple of "firsts": For the first time with Hans Huijsing a representative of Xerox took part in the discussion,

"The effort in increasing the mutual understanding is a slow but rewarding process"

after Kodak, HP, Océ and Xeikon another big player in the digital business. Also with Peter Jackson and Brian Palphreyman from Sensient Inks (UK), for the first time inkjet ink manufacturers joined the Round Table. With 24 participants, this meeting had the highest number of participants so far.

Thanks to Willy van Assche, the meeting took place at Stora Enso in Langerbrugge near Gent in Belgium. This way it was possible to lay the base for a more substantial discussion by visiting the Langerbrugge deinking plant in the morning. Especially the guests from the US never before had seen an actual plant. As it is one of the goals of the Digital Print Deinking Alliance (DPDA), formed by inkjet printer manufacturers in order to "determine when inkjet printed paper will impact paper recyclers" and to "review deinking processes worldwide to put the issue into perspective", it was especially helpful to provide an opportunity to experience the magnitude of the operation and the actual limitations of the deinking process.

To familiarise all participants with the state of the discussion, Axel Fischer gave an introduction to INGEDE and the problems with the deinkability of digital prints, especially with inkjet inks and liquid toner. He also showed recent examples of inkjet printed newspapers that are already available in the US. John Kettle of KCL (Finland)

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Stora Enso Langerbrugge

In this issue:

CALENDAR OF EVENTS

28 – 29 Apr 2009
INGEDE Working Group "Recovered Paper Quality"
WEPA
Müschede/Germany

6 – 7 May 2009
COST E 48 Final Conference
"The limits of paper recycling
Munich/Germany

11 May 2009
CEPI
Brussels/Belgium

12 May 2009
PTS Forschungsforum
Heidenau/Germany

8 – 9 June 2009
INGEDE Working Group "DIP Quality Management"
Kadant
Vitry/France

23–25 June 2009
Zellcheming Expo
meet INGEDE at Booth 315
Wiesbaden/Germany

26 June 2009
INGEDE Country Representatives
Wiesbaden/Germany

INGEDE News is published monthly by the INGEDE Office – International Association of the Deinking Industry contact: E-mail: office@ingede.org

gave an overview about ink and paper interactions, focusing mainly on inkjet and the influence of coatings and the paper surface on the bonding of the ink.

Andreas Faul presented more details about the deinkability scores of the different printed products that have been tested by INGEDE and its cooperation partners. Especially the high number of offset prints that failed the threshold for deinkability led to an intense discussion about the relevance of the deinkability of other prints. Together with the proceeding visit to the plant it was possible to explain the difference: Though some offset prints might be difficult to deink, inkjet prints have a much more detrimental impact in the mill as the soluble ink also dyes the other fibres in the mixture.

Manfred Münz of Océ gave a presentation interpreting the results of the recent workshop that INGEDE and bvdm about a BMBF (German Research Ministry—see page 3) sponsored project dealing with the deinkability of offset prints. He identified a major substrate influence, complementing this with

Old Town of Gent

results of the deinkability of dry toners where one special paper also led to bad deinking results. He also presented results from HP Indigo's research with different papers and from Océ's inkjet printing system (Jetstream) with coated and uncoated papers.

Gregg Lane of HP presented results of HP's joint research with PTS on the deinkability of pigmented inkjet inks. Deinkability testing according to a method by Nalco showed different results from INGEDE Method 11 (different surfactant, different pulping consistency, different chemical concentration). The use of tall oil fatty acid (TOFA) rather than oleic acid led to improved ink elimination and brightness, but lower yield. Thanks to the good representation of the paper industry it was possible to underline the relevance of INGEDE Method 11 for deinkability testing, though this still seems to be not accepted in the inkjet printer industry.

Axel Fischer

Meeting of ERA in Italy

On March 26 and 27, 2009 the European Rotogravure Association (ERA) held a joint meeting of the ERA Environment, Health and Safety Commission and ERA Paper Commission, in Casale Monferrato (Italy).

The event, attended by approximately 50 people, was hosted by the Italian printing machine supplier Cerutti S.p.A that also organized a visit at their R&D facilities the day before the meeting. In this context, INGEDE has been invited to make a presentation on "Recyclability of printed products: assessment schemes and results" that was given

„INGEDE gave a presentation on Recyclability of printed products: assesment schemes and results"

by the Italian Country representative Dr. Graziano Elegir.

The meeting, was a good opportunity to update the audience on the most recent results concerning the deinkability of rotogravure products. The average good deinkability score of this category of products was acknowledged but also some remaining issues such as red discolouration and in few cases the presence of higher amount of dirt specks.

During the presentation INGEDE has also pointed out that the European Recovered Paper Council (ERPC) has recently started a discussion regarding an assessment scheme on the removal ability of adhesive application. In this framework a European survey will be carried out and INGEDE will provide a significant part of the funding, however, co-financing is needed to cope with the large number of samples that will be analyzed.

Graziano Elegir

INGEDE Project 7105 „Deinkability of Printed Products“ Final Presentations

In March 2009 bvdm (Bundesverband Druck & Medien) organised two seminars in Düsseldorf and in Ismaning near Munich. The goal of these similar events was to inform printers about the results of INGEDE Project 105 05 “Deinkability of Offset Printed Products“.

This research project was funded by German Ministry for Education and Research. INGEDE was one of the partners in the project. Other partnerts were bvdm and the ink suppliers Siegwerk Druck and Flint Group. Furthermore the research institutes PMV, IDD, PTS, SID and fogra worked hand in hand in this project.

Walter Fleck (bvdm) gave an overview on the history of paper recycling in Europe and the corresponding policy developed by the authorities. In the following Andreas Faul (INGEDE) explained the deinking technology and assessment scheme ”Deinkability Scores”. The structure and build up of the laboratory tests was presented by Beatrix Genest and Carolin Sommerer of SID Leipzig. Alexander Schiller of the research institute Fogra presented the results of offset heatset on coated papers and Elisabeth Hanecker of PTS the results of offset heatset on uncoated papers. The offset coldset evaluations were shown by Hans-Joachim Putz of PMV/TU Darmstadt. Finally Wolfgang Bartonitz (IDD/TU Darmstadt) summarized the results of the project.

The research projects comprised of numerous printing and deinking tests with different inks, papers and printing conditions. At least as far as the paper is concerned, the three grades represent a wide variety of the market. All tests used a standard printing pattern which was developed in the early stage of the project. Most of the printing was done in sheet-fed offset and the most important results had to be confirmed in industrial scale. There we had to learn that the possibility to simulate heatset on uncoated papers is limited.

visit of the project group at SID Leipzig

The tests have shown that in respect of recyclability the printing conditions in most of the cases do not have to be adapted. The major influencing factor are inks, paper and their combination. However, the differences in the results of this project are much smaller compared to the ones achieved if using different printing technologies.

“These events raised awareness of the publishers and printers in terms of being a part of the paper cycle and take over responsibility of their product sustainability.”

These two events also raised awareness of the publishers and printers in terms of being a part of the paper cycle and take over responsibility of their product sustainability.

An article about the seminar in Düsseldorf was published in “World of Print” issue 4/2009. The final report of the project is in progress and will be finished by end of June 2009.

Andreas Faul