

INTERNATIONAL SYMPOSIUM ON TECHNOLOGIES FOR DIGITAL PHOTO FULFILLMENT (TDPF) 2018



Technical Papers Program: Schedule and Contents*

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*Excerpted from the

Printing for Fabrication 2018 Abstract Book and USB Proceedings
where TDPF 2018 was collocated as a session within the event.

TDPF 2018 occurred Monday 24 September 2018 in Dresden, Germany



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TRACK TDPF

INTERNATIONAL SYMPOSIUM ON TECHNOLOGIES FOR DIGITAL PHOTO FULFILLMENT (TDPF) 2018



Session Chair: Joe LaBarca,
Pixel Preservation International (USA)

12:00 – 18:10

Salon St. Petersburg

12:00 **Welcome and Introductions**

12:10 **V-Paper Tower for In-House V-Paper Production**, *Brigitte Peleman-Vantieghem, Peleman Industries (USA)***

Last year we reviewed V-Paper, the new paper product for premium photo books that will lay flat when opened. The V-Paper is specially produced to easily allow production of premium lay-flat photo books. This paper will discuss the new V-Paper Tower, which is available for use in-house to produce moderate to high volumes of V-Paper for premium photo books produced in-house and on-site. Lay-flat photo books are a growing segment of the premium photo gifting market. This paper will also review the new PHOTOMORE photo gifting products available to produce in-store customized photo gifts.

12:40 – 14:00 Lunch Break (on own)

State-of-the-Art Keynote:

Printing Future Electronic Devices with Organic Semiconducting Materials,

Mark James, Merck Chemicals Ltd. (UK)

14:00 – 14:50

see details page viii, Congress Center Saal 1&2

14:50 – 15:10 Break to Change Rooms

15:10 **The Importance of Dark Keeping Factors in Determining Overall Image Permanence of Photographs**, *Patrick Webber, Kodak Alaris (USA)***

Traditional reporting of the image permanence of photographs has tended to primarily focus on light stability. The reality of how consumers use and store prints is that the vast majority of the print life is stored in the dark. The dark stability of traditional silver halide photographic paper was primarily driven by thermal affects. However many of the newer digital material used for photographic prints are susceptible to additional dark factors including humidity, and atmospheric pollutants can result in predicted life times being significantly shorter than reported by light stability data alone. This paper will discuss these additional dark factors and provide comparisons to traditional silver halide photographic paper.

15:40 **Image Permanence of Photographic Prints Under LED Lighting**, *Hiroshi Ishizuka¹, Evert Groen², Nobuhiko Uchino¹, Yoshi Shibahara¹, and Shin Soejima¹; ¹Fujifilm (Japan), ²FUJIFILM Europe B.V. (The Netherlands)*

LED (Light Emitting Diode) lighting has been widely used as a major light source to illuminate photographic prints. Stipulating the spectrum of the LED lamp is essential to evaluate the light stability of photographic prints under LED lighting. Moreover, the uniformity and consistency of the light are also critical for the image permanence tests. These essential points have been discussed in this study. The fading behaviours of some photographic prints under LED lamps are shown in comparison with those under UV filtered Xe lamp, which simulates indirect sun light.

16:10 – 16:40 Coffee Break — Congress Center Foyer

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16:40 **Improvements in the Image Quality of Thermally Printed Security Cards**, Mark Mizen, HID Global (USA)**

Thermal transfer printing has proven useful in the production of security cards using relatively low-cost desktop printers. Retransfer printers are particularly popular for the production of technology cards incorporating edge-to-edge graphics. Unlike standard thermal transfer printing, retransfer printing uses an intermediate transfer film to transfer the image to the security card. Most thermal printers operate at 300 dpi; however, there has recently been a move to higher resolution 600 dpi printers. These printers are able to more easily reproduce small text sizes and intricate graphics, including Asian fonts.

Thermal transfer is an asymmetric process in that the thermal printhead governs resolution in one dimension, while the ability to rapidly change temperature of individual elements in the thermal printhead governs resolution in the other dimension. To minimize the overall cost of the printer, the thermal printhead is generally aligned with the short edge of the plastic card.

High-resolution printheads improve image quality with resin transfer and dye sublimation printing. Resin transfer is generally used for black text and bar codes, while dye sublimation is optimized for colored text, graphics, and photos. For text and bar codes, higher resolution gives greater legibility to small text sizes and greater readability to bar codes. For color graphics and photos, higher resolution improves the printer's ability to reproduce fine details.

17:10 **An Overview of WIR Print Permanence Ratings for Color Print Materials Used in Consumer and Professional Markets**, Henry G. Wilhelm, Wilhelm Imaging Research, Inc. (USA)**

This presentation gives an overview of the various factors affecting the display permanence and dark-storage stability of the many types of color prints commonly found in consumer and professional markets. The similarities and differences between Epson, Canon, and HP inkjet prints, made with dye-based inks, pigmented inks, traditional silver-halide (chromogenic) prints made with Kodak and Fuji color papers (including the new, improved-permanence Fujicolor Crystal Archive papers to be introduced by Fujifilm in late 2018), thermal-dye-transfer prints (often called "dye-sub" prints), ChromaLuxe dye-sublimation prints (often referred to as "metal prints"), and prints made with UV-curable pigment inkjet processes are discussed. WIR print permanence test methods are described for light stability, dark storage stability, ozone resistance, waterfastness, and humidity-fastness. The effects of ozone in polluted air is an especially important factor to consider in evaluating the permanence of dye-based inkjet prints made with "instant dry" microporous photo papers. In this study, both the Wilhelm Imaging Research "Display Permanence Ratings" and the WIR "Unprotected Ozone Resistance Ratings" were found to cover an extremely wide range – the most stable prints were rated to last more than 200 times longer than the least stable prints..

17:40 **Company Profiles**



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