



IMI Digital Printing Conferences, Lisbon Portugal 2005



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Lisbon Portugal 2005

IMI had a two day course on UV inkjet printing technology implementation on November 7th and 8th 2005 in Lisbon Portugal.

Some of the top speakers at the conference were:

- 1 Steve Temple, Xaar
- 2 Dr. Nick Campbell, Inca Digital
- 3 Konrad Vosteen & Sven Peppekus, Thieme
- 4 Dr. Raghu Das, IDTechEx
- 5 Yoshihiko Masakawa, Olympus

Accommodations were wonderful and affordable. The Sheraton hotel & towers were able to get me a room for well under the normal price of \$400/night add to that the networking you get to do and knowledge and it is worth it no matter what the cost.

This is a very educational conference and you owe it to yourself to go if you are at all interested in UV/inkjet printing

A rundown of the events taken from IMI's website is as follows:

Tuesday, November 8, 2005



11:00 a.m. - 5:00 p.m. Conference Registration

2:00 p.m.

Session 1: Advances in print-head technology the key to future performance enhancements

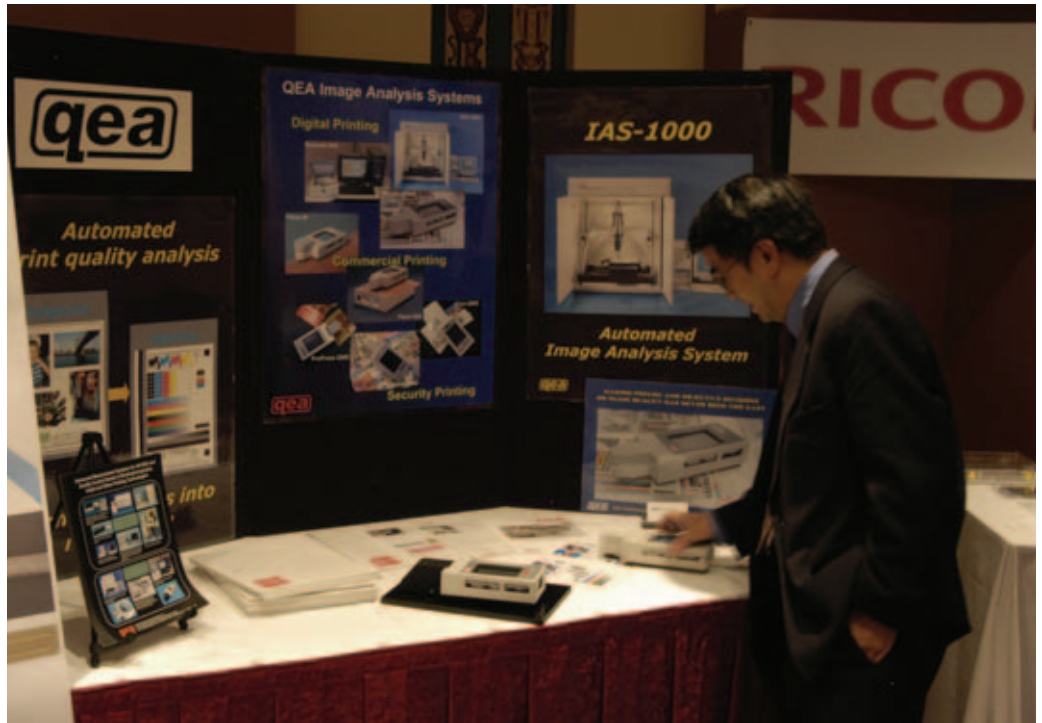
WELCOME AND INTRODUCTIONS

Alvin G. Keene, President, Information Management Institute, Inc., Kingfield, Maine, USA & Director, IMI Europe, Cambridge, England

TECHNOLOGY DEVELOPMENTS AND FUTURE ADVANCEMENTS

Michael Willis, Managing Director, Pivotal Resources, Cambridge, England

- Latest products & announcements
- Desk-top gets to 1pl drops
- Dye-sub printing challenges ink jet photo
- Existing industrial applications: most OEM needs met except cost
- Emerging industrial applications requirements
- Fixed heads: not just more nozzles
- Wider fluid handling capability
- Sub-picoliter drops: the move to femoliters
- The patent scene
- Emergence of MEMS technology
- New players



Companies were offered free tabletop display space

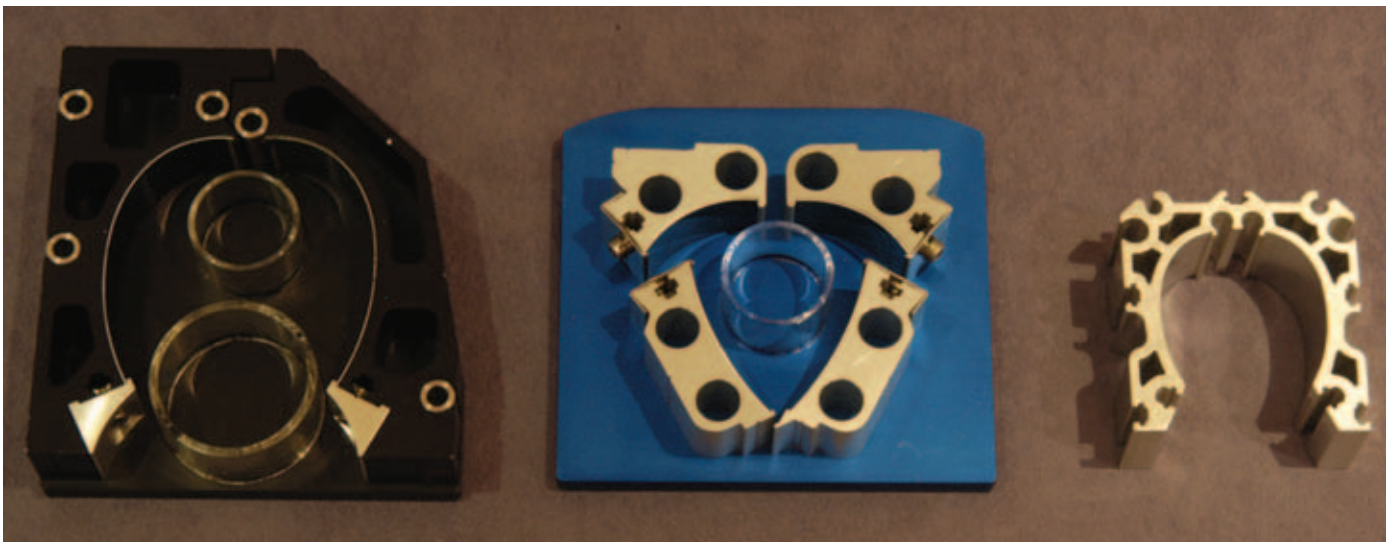


Exhibit of UV-curable ink reflectors, part of the exhibits

THE ABC'S OF HP'S SPT (SCALE-ABLE PRINTING TECHNOLOGY)
Rob Beeson, R&D Competitive Intelligence Team Leader, Hewlett-Packard, Corvallis, Oregon, USA

- Outline of SPT goals
- Introduced products summary
- New silicon technology
- New ink delivery system
- New individual ink supplies
- Vivera inks
- Looking forward

THE EMERGENCE OF KODAK – FROM DESK-TOP TO COMMERCIAL PRINTING

Dr. Markus Pahler, Director Strategic Programs, Kodak Versamark, Dayton, Ohio, USA

- Kodak in transition
 - From market leader in the classical photo consumer business
 - To one of the dominant players in commercial printing
- Growth and diversification by acquisition
- Growth by technological development
- Actual situation of Kodak and the status of the transition
- Market opportunities for modern printing technologies
- State of the art of the Kodak professional ink jet technology

INNOVATION WITH RICOH INDUSTRIAL INK JET TECHNOLOGY AND NEW APPLICATIONS
Mark Elsbernd, Vice President, Ricoh Printing Systems America, Simi Valley, California, USA

- Printhead design advancements
 - Silicon (AMS 192)
 - Metal – Stainless Steel (Gen3 E3)
 - Page width arrays
- New industrial applications
 - Conductive materials
 - 3D Models – Rapid prototyping
 - High end proofers
 - Textiles

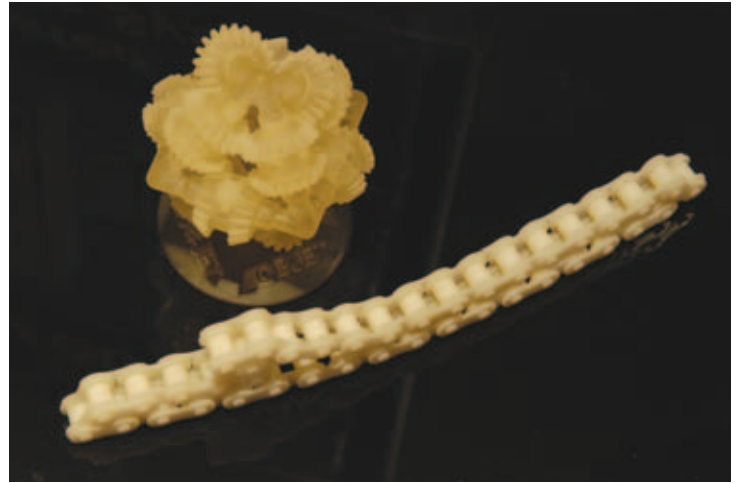
NEW M-CLASS: SHAPED PIEZO SILICON MEMS™ – A BREAKTHROUGH IN PIEZO PRINthead DESIGN FOR INDUSTRIAL PRINTING AND DECORATIVE APPLICATIONS
James Gill, European Sales Director, Spectra Inc., Lebanon, New Hampshire, USA

- Powerful benefits of Silicon MEMS



Tabletop displays at IMI 2005

- Overall capabilities
 - M-300/10 Jet Module
- Construction
- Specifications
- Performance
- Grayscale
- M-Class Printhead Configurations
 - Hex configuration & target applications
 - Quad configuration & target applications
 - Custom configurations
- Development kit
- Summary



Rapid Prototype examples on display

HYBRID SIDESHOOTER – LATEST DEVELOPMENTS IN PIEZO DOD PRINthead ARCHITECTURE

Steve Temple, Technical Director, Xaar plc, Cambridge, England

- New printhead architecture to enable single-pass systems adoption in production environments
- Improvements in quality, speed & reliability
- Allows more prolonged & stable jetting of wider range of functional fluids
- Creates digital printing opportunities in packaging & emerging applications incorporating printed electronics, bio & nano-technologies

NEW POWERS TO YOUR CUSTOMERS: LOW COST LASER CUTTING IN INK JET PRINTERS

Olivier Acher, Chief Scientist, CEA, Monts, France

- How it works: the combination of a laser diode and an additional ink cartridge
- Applications and markets
 - Moving the value from pre-cut media to the printer
 - Giving your customers new powers
 - From prints to objects: a smooth step toward personal fabrication?
- The performance/price learning curves

7:00 p.m. Reception

Wednesday, November 9, 2005

8:30 a.m.

Session 2: Advances in media technology, inks & industrial applications

MEDIA DIVERSITY – SOLVENT & UV-CURABLE INK JET SYSTEMS CREATE NEW CHALLENGES AND OPPORTUNITIES

Michael Flippin, Vice President, Web Consulting Inc., Boston, Massachusetts, USA

- Impact of the growth of solvent, eco-solvent and UV-curable ink jet on the ink jet hardware installed base
- Changes in technical and manufacturing requirements for “next generation” ink jet media
- New applications and cost reduction as additional drivers for change in media offerings
- Sizing and forecasts for “dedicated” ink jet media (S, ES, US, AQ) and generic printable media
- Who are the key manufacturers, and who has competitive advantage?
- Strategic and tactical considerations in designing, manufacturing and distributing “next generation” ink jet

media

- Conclusions and recommendations

THE CHANGING LANDSCAPE IN THE PHOTO PRINTING MARKETPLACE

Rob Kershaw, Regional Sales Director, Ilford Imaging, Marly, Switzerland

- Historical perspective 2000 – 2005
 - Massive changes in photo market over past few years
 - It is not over yet!
- Output technology shift and trends for the future
 - Historic industry leaders experiencing significant reductions in traditional businesses
 - Restructuring, bankruptcy & strategic reassessments
- Where will prints be made?
 - Where and how photo prints will be made will continue to evolve
- Battle of the brands
 - Brand leaders of the past will not necessarily be those of the future
- What lies ahead
 - Who will be the winners and losers of the future?
- Technical achievements in print engine design
- Printhead configuration options
- Next generation developments

INK JET & SCREEN PRINTING - A HYBRID SOLUTION

Konrad Vosteen, Product Manager Digital Printing Systems & Sven Peppikus, Sales Manager, Thieme GmbH & Co. KG, Teningen, Germany

- The requirements of screen printers & meeting their needs
- Combining the benefits of screen printing with ink jet
- The hybrid flatbed concept
- Development of the M-Press with Agfa UPH printheads
- Key applications
- The future of flatbed printers & screen printing

UPS & DOWNS OF UV WIDE FORMAT PRINTING

Paul Yandell, Global Business Development Manager, Fujifilm Sericol, Broadstairs, England, UK

- Speed versus productivity
- How to widen the colour gamut
- Is UV just a solvent printer with a lamp?
- White – fashion statement or need?

LEDs FOR UV CURING – PAST, PRESENT & FUTURE

Dr. Nick Campbell, Project Manager, Inca Digital Printers, Cambridge, England, UK

- Main factors for UV curing with LEDs
- Development of LEDs to their present state



“Nicholas Hellmuth speaking about his work at FLAAR. IMI gives people who come to the event the opportunity to speak about their own projects for 5 minutes.”

- Commercial implementation of LED curing system in a flatbed printer
- Future potential developments of LED curing

1:00 p.m. Luncheon

2:30 p.m.

Session 2 continued

THE CHALLENGES OF INK JET INK FORMULATION FOR PACKAGING

Peter Walshe, Business Development Manger, SunJet, Midsomer Norton, England, UK

- The unique and diverse challenges of the packaging print market
- Recent developments in ink jet ink technology and how this will impact the packaging sector
- FastJet: challenges for formulating inks for corrugated packaging
- Ink jet in the packaging market: opportunities and future ink developments

HIGH SPEED CURING FOR UV INK JET

Manuel Blauensteiner, Product Manager UV Ink Jet, IST Metz GmbH, Nuertingen, Germany

- Current applications and solutions
- Focused future applications for UV ink jet
- Influencing factors of UV curing (inks, printheads, UV systems)
- How to reach high speed in a cost efficient way

Session 3: Textile printing – an update

ACCESSING THE DIGITAL TEXTILE MARKET OPPORTUNITY

Stewart Partridge, Managing Director, Web Consulting, Abingdon, England, UK

- Textile printing recovers from global slump
- At last - digital textile printing comes of age
- Emergence and applications for high volume platforms
- Implications and forecasts for hardware, ink and media
- Strategies and tactics for generating profits from digital textile

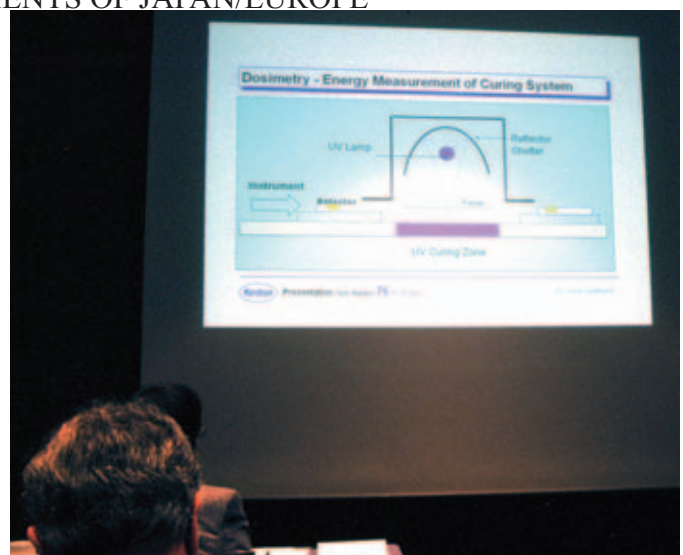
TEXTILE ASIA UPDATE – MEETING THE REQUIREMENTS OF JAPAN/EUROPE

Akiyoshi Ohno, President, Konica Minolta IJ Technologies, Tokyo, Japan

- Different requirements for Japan and Europe
- Matching technology to local markets and applications
- Uniqueness of KonicaMinolta TP-V
- Keys for success and future strategy
- INK JET HEAD DEVELOPMENT UPDATE ... on the eve of the revolution
- PED / Print bar / Ultimate End-shooter

DIGITAL PRODUCTION A REALITY THROUGH STORK U SEE & THE DIGITAL TEXTILE STANDARD

Jorg van der Meij, Marketing Manager, Stork Digital



Imaging B.V., Boxmeer, The Netherlands

- The need for standards in the emerging digital textile printing industry
- Launch of Stork's U See standard 3 years ago
- Customer benefits
- Assurance of quality from digital sample to digital bulk
- Growth of U See digital sampling bureaus and digital printing mills
- Industry examples from leading brand owners
- Economic feasibility of today's digital printing
- Experience with Digital Print Asia (DPA) certified mill in Thailand

SUPPLIERS FORUM

5 minute presentations related to technology, capabilities, services, new product introductions, etc. the Suppliers' Forum is open to all conference registrants

7:00 p.m. Reception

Thursday, November 10, 2005

8:30 a.m. Session 4

Session 4: Emerging applications – potential to double the size of the ink jet industry?

PRINTED ELECTRONICS, DISPLAYS, RFID & INK JET

Mark Hanley, Managing Partner, IT Strategies Inc., Hanover, Massachusetts, USA

- Slow sequential development from conductive chemistry printing to semi-conductive chemistry
- Market definitions and a quantified basis for projections of the markets
- Summary of major ink jet activities in printed electronics so far
- The transition to predominantly high volume ink jet printing of electronics is likely to be relatively rapid
- Working minimum ink jet specifications for the nearest markets

PRINTING ELECTRONICS – THE APPLICATIONS AND YOUR OPPORTUNITIES

Raghu Das, Managing Director, IDTechEx Ltd, Cambridge, England, UK

- Making packaging and products smarter with disposable electronics
- Major players, their progress and what's coming next
- The opportunity for inkjet printing
- The market for printed electronics 2005-2025

HIGH SPEED PRINTING RFID TAGS

Dr. Alan Hudd, President & CTO, Xenma Technology Ltd, Royston, England, UK

- Evolution of inkjet and printed electronics
- How does the popular belief and benefits of customized short run digital printing model fit the requirements of low cost mass printing of RFID tags?



- The RFID inkjet proposition
- System and technology video demonstration
- Direct write Print2Chip capabilities

DIGITAL PRINTING OF ELECTRONICS USING MASSIVELY INTEGRATED INK JET PRINTING

- Economics and viability triggers for commercial success

Steve Jones, Chairman, Circatex Group Ltd, South Shields, England

- Very high volume manufacturing of electronics has migrated to the Far East
- But much of the design function remains in Europe and the US.
- Western design community needs high technology, rapid response service driven cost competitive solutions
- Companies supporting this transformed industrial climate need to produce complexity independent, high-mix, short-run production runs with low up-front costs
- Modern designs are driven by ever increasing functionality and miniaturisation
- Innovative and disruptive technology solutions abound but most not yet rugged or industrial strength
- Looking further to the future, it is possible to envisage a production process where the entire electronic circuit/ assembly can be digitally printed
- However, modern electronics is about routine precision between the CAD design and finished product that is measured in microns - Where are these production machines?
- Development of a proof of concept ink jet machine that will allow some of these boundary conditions to be explored
- Two 40,000 nozzle grey-scale heads to print single pass 700mm wide panels with feature positional accuracy of better than 10 microns in less than one second
- 1000mm wide area can be scanned with smaller heads to investigate electronically active inks

INK JET SOLUTIONS FOR THE PRINTING OF ELECTRONIC COMPONENTS

Erik Moderegger, Project Leader, AT&S AG, Leoben, Austria

- Trends in miniaturisation of printed circuit boards of electronic devices
- Resistors & capacitors embedded within multi-layers
- Ink jet as a manufacturing solution
- Accurate materials deposition
- Accurate positioning of components relative to previously produced
- In-house process development at Europe's largest pcb manufacturer
- From ideas to production
- Innovations in ink development
- Demands on systems integration and printing hardware

1:00 p.m.

Adjournment



UV lamp