



17th Annual Ink Jet Printing Conference

February 6-8 , 2008

Radisson Resort Orlando - Celebration
Kissimmee (Orlando), Florida



IMI's unique **17th Annual Ink Jet Printing Conference** is the only 2008 U.S. ink jet printing industry event devoted entirely to ink jet printing technologies, markets and applications. Ink jet printing continues to make technology advancements in product functionality, cost performance, print quality and nonprinting/deposition capabilities. Such improvements have made ink jet printing the leading digital printing technology with expansion into many new markets and applications. In addition to personal and office computer printing, applications such as display graphics, materials deposition, digital photography, digital printing presses, multifunction printers, printable electronics, 3D modeling, biomedical, textile printing, packaging printing and many other specialty printing and nonprinting applications are increasingly using ink jet as the technology of choice. As ink jet printing becomes a manufacturing tool as well as a printing technology, market opportunities have never been better, albeit in a very competitive environment.

This conference program is designed to bring together the ink jet industry's leading experts to provide a comprehensive assessment of the ink jet printing industry. The program will address the most recent innovations, trends and issues critical to continued adoption, growth and expansion of ink jet printing applications and markets. As ink jet printing continues to increase market share in numerous application sectors; this **17th Annual Ink Jet Printing Conference** provides an unique opportunity for representatives from all segments of the printing industry to obtain information critical to their understanding of ink jet printing technology and market dynamics that are shaping the industry's future.

Conference Displays & Suppliers' Forum

IMI's **17th Annual Ink Jet Printing Conference** provides the opportunity to have a free display space to exhibit your products, technology or services. Each conference registrant also has the opportunity to give a commercial 5-minute Suppliers' Forum presentation.

IMI will cooperate with all interested parties to provide appropriate space so products can be displayed and demonstrated during the conference breaks and receptions. **There is no fee in addition to the conference registration fee to have a display and/or to give a Suppliers' Forum presentation.**

To reserve your complimentary display space and Suppliers' Forum presentation slot, please register online and check off the box indicating your participation OR complete the registration form on next page and fax to +1-207-235-2226 OR send an email to al@imiconf.com

Conference Co-Chairs

Dr. Ross N. Mills, i T i
Mike Willis, Pivotal Resources

**Ink Jet Academy
Theory of Ink Jet Technology**

February 4-5, 2008

See Program on Page 3

17th Annual Ink Jet Printing Conference

Wednesday, February 6, 2008

11:00 a.m. Conference Registration

1:30 p.m. Opening Session
The Expanding Ink Jet Industry

WELCOME AND INTRODUCTIONS

Alvin G. Keene, President, Information Management Institute, Inc., Carrabassett Valley, Maine
Dr. Ross N. Mills, Chairman & Chief Technology Officer, imaging Technology international, Boulder, Colorado
Mike Willis, Managing Director, Pivotal Resources, Cambridge, England

INK JET: NEW TECHNOLOGY DEVELOPMENTS ENABLE EVER GROWING APPLICATIONS

Mike Willis, Managing Director, Pivotal Resources Ltd., Cambridge, UK

- The Changing Technology Base
 - Use of Silicon
 - MEMS Actuators
 - Emerging Technologies
- Single Pass: The Entry Point to the Commercial & Industrial Print Market
 - Key Requirements
 - Is the Technology up to it Yet?
 - Commercial Considerations
- The Patent Scene: Update on Vendor Filings
- Patent Research: A Crystal Ball?

SIZING THE OPPORTUNITIES FOR INK JET

Michael J. Flippin, President, Web Consulting Inc., Boston, Massachusetts

- Big Markets vs. Profitable Applications
- Targets for Ink Jet vs. Analog Technologies
- How to Judge Ink Jet as a Manufacturing Process
- Digital Markets Looking Traditional (in Structure & Profitability)

TRENDS IN DESKTOP INK JET PRINTER MARKET

Tom Ashley, Director, Pivotal Resources USA, Kentucky

- Desktop Printers
 - Latest Products
 - New Technologies
 - Creative Marketing
- Inks and Media
 - Dyes & Pigments
 - Ink Branding
 - Media Developments
- Aftermarket Supplies
 - Trends In Aftermarket Supplies
 - Litigation & Changes In The Law
 - Other Challenges

INDUSTRIAL (NON-OFFICE) INK JET STATE-OF-THE-ART & MARKET

Mark Hanley, President, I.T. Strategies, Hanover, Massachusetts

- Heading for \$10B Vendor Revenues in 2011
- Who gets what Parts of These Revenues?
- When Will the Ink Jet Curve Peak?

6:00 p.m. Reception

Thursday, February 7, 2008

7:30 a.m. Continental Breakfast

8:30 a.m. Session 2
Technology Advancements

BRIDGING THE PATH TO A SILICON FUTURE

Howard Baldwin, Vice President Sales, Fujifilm Dimatix, Lebanon, New Hampshire

- Changing Printhead Construction Techniques
 - Carbon
 - Hybrid
 - Shaped Piezo Silicon
- VersaDrop Jetting Technology
 - Performance Characteristics
 - User Benefits
- Future Directions

LILO – LIGHT INITIATED LIQUID OFFSET – POTENTIAL TO MOVE INK JET TO NEW PERFORMANCE RANGE

Bryan Palphreyman, Director of Business Development, Inkski Ltd., Cambridge, UK

- Technology Overview
- Speed & Resolution Potential
- Scalability & Application Opportunities
- Market Roadmap
- Development Tools

REBIRTH OF ELECTROSTATIC INK JET TECHNOLOGY?

Dr. Ross N. Mills, Chairman & Chief Technology Officer, imaging Technology international, Boulder, Colorado

- What Is It & How Does It Work?
- Modes of Operation
- Technical Challenges
- Printing & Deposition Applications
- Is the Technology Viable?
- Where does the Electrostatic Technology Fit?

MICROPIEZO TECHNOLOGY FOR INDUSTRIAL INK JET MARKETS

Mark Eisbernd, Senior Manager Ink Jet Device Business Development, Epson America Inc., Long Beach, California

- Use of Epson's Printhead & Ink Technology Beyond the Desk-top
- Current Applications
 - Sign & Graphics
 - Photo/Minilabs
 - Textile Printing
- Commercial Printing
- OEM Ink Flexibility
- Future Markets for Epson's Technology

12:00 p.m. Luncheon

The Radisson Resort Orlando - Celebration address is

Radisson Resort Orlando - Celebration

2900 Parkway Boulevard
Kissimmee, Florida 34747

Phone: 407-396-7000

Fax: 407-396-4577

www.radisson.com/kissimmeefl

1:30 p.m.

Session 3

Innovation:: Lifeblood of the Industry

INK JET INKS FOR PRINTING & PUBLISHING – TRADEOFFS OF DYES VS. PIGMENTS

Dr. Douglas E. Bugner, Senior Laboratory Head, Graphics Inkjet Platform Center, Graphic Communications Group, Eastman Kodak Company, Rochester, New York

- Historically, Dyes have been Colorants of Choice for DOD & Continuous Ink Jet Inks: Ease of Formulation & Manufacture, Accessibility of Brighter Colors & Larger Color Gamuts Compared to Pigmented Inks
- Dye Based Inks Suffer from Overall Lack of Permanence & Durability
- Performance & Permanence Perspective on Use of Dyes & Pigments as Ink Jet Ink Colorants
- Recent Advances in Pigmented Ink Jet Inks
- Recent Product Introductions In Commercial Printing Markets

ADVANCES IN INDUSTRIAL TEXTILE INK JET PRINTING

Dr. Alan L Hudd, President & Chief Technical Officer, Xennia Technology Limited, Letchworth, Hertfordshire, UK

- Digital Textile Printing Applications Overview
- Ink Jet Proposition for Technical Textile to Decoration Solutions
- New Production Textile Ink Jet Printer Solution for High Throughput & Reliability
- Novel Textile Pigmented Ink Jet Inks
- Platform to Leverage to Suit a Myriad of Other Production Line & Web Based Decoration Applications
- Outlook for Single Pass Production Line Printing

INK JET ANALYSIS USING MACHINE VISION SYSTEMS: FROM DEVELOPMENT THROUGH PRODUCTION

Yair Kipman, President, ImageXpert Inc, Nashua, New Hampshire

- Visualization & Measurement of Drops in Flight
 - System Design Considerations
 - Unique Features
- Functional Printhead Testing in Production
 - Dot Position Analysis
- Print Quality Analysis
 - Tools & Common Methods

UV INK JET PROGRESSES TO NEXT GENERATIONS

Alan Mills, Business Development Manager, Nordson UV, Slough, Berks, UK

- Challenges with UV Curing Equipment on Ink Jet Printing Machines
- Methods for Dealing with Heat from UV Lampheads
- Different Types of UV Systems Available
- UV Applications

SUPPLIERS' FORUM: 5-Minute Presentations Related To Technology, Capabilities, Services, New Product Introductions, etc. The Suppliers' Forum is open to all Conference Registrants

6:00 p.m.

Reception

Friday, February 8, 2008

7:30 a.m. Continental Breakfast

8:30 a.m. Session 4

Integration & Implementation for Real World

NEW EXPANDABLE EVALUATION KITS FOR BINARY, GREYSCALE, SCANNING & SINGLE PASS INK JET TECHNOLOGY

Clive Ayling, Printer Business Manager, TTP, Royston, Hertfordshire, UK

- What Do People Want to Evaluate (When They Consider Using a New Printhead)?
- How Much Application Software is Required to Evaluate Ink Jet (or just Test a New Printhead) in Your Application?
- How to Progress from an Evaluation Test to a Working Product in the Shortest Possible Time

HIGH SPEED INDUSTRIAL INK JET DESIGN & INTEGRATION CHALLENGES

Yuan Chang, Vice President of R&D, Amica Software, Irvine, California

- Software, Hardware & Mechanical Integration
- High Speed Data Path Integration Challenges
- Grayscale Printhead Challenges
- Case Study: High Speed, Single Pass Array, Wide Format UV Press
- Application Challenges & Results

WIDE FORMAT INK JET: PRINTER DESIGN TRANSITIONS

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

- Move from Multipass to Single Pass
- System Design & Solution Provision
- Dawn of "Industrial" Ink Jet
- Last of Wide Format Multi Pass Printers?
- Technology to Make This Possible
- Will the New "Ink Jet" Technologies Replace Conventional Piezo

INK JET'S ROLE AS A MANUFACTURING TOOL

Dr. Rich Baker, Director-Business Development, Technology Integration, Fujifilm Dimatix, Lebanon, New Hampshire

- Ink Jet Technologies for Industrial Fabrication
- Review of Ink Jet Technologies for Use in Industrial Applications
- Criteria Ranging from Economic Considerations to Process Practicality
- Commercial Examples: High End Electronics Device Fabrication, Digital Coatings & Commercial Food Decoration

CURRENT OPPORTUNITIES FOR D-O-D INK JET PRINTING OF PACKAGING

Peter Addington, Packaging Business Manager, Xaar, Cambridge, UK

- Theoretical & Practical Benefits of Digital Printing in Packaging Arena
- Review of Projects to Date
- Advantages of Xaar 1001 Printhead When Employed in Packaging Projects

INCORPORATING SINGLE PASS INK JET INTO A HIGH-END LABEL PRESS

Peter Walsh, Business Manager, FFEI Limited, Hemel Hempstead, UK

- The Challenge: Customer Requirements, Speed, Configurations & Substrates & Synchronization
- The Technologies - A System Approach
 - Printheads & Cleaning Systems
 - Datapath & Web System
 - Ink Delivery, Formulation & Curing Systems
 - Screening & Color Management
- The Pitfalls, Results & Lessons Learned

1:00 p.m. Adjournment

Ink Jet Academy: Theory of Ink Jet Technology

February 4-5, 2008

Monday, February 4, 2008

11:00 a.m. Registration

1:00 p.m. Opening Session

WELCOME & INTRODUCTIONS

Alvin G. Keene, President, Information Management Institute, Inc., Carrabassett Valley, Maine

INTRODUCTION

- Course Overview
- Types Of Ink Jet Technology
- Brief History
- Drop On Demand Technologies
- Thermal & Piezo Ink Jet
- State Of The Art
- Office & SOHO Markets & Applications

INDUSTRIAL INK JET PRINTING

- Evolution of Industrial Ink Jet Printing
- Technology Advances
- Printheads & Printers
- Ink Technologies
- Current Status & Emerging Applications

INK TECHNOLOGY

- Understanding the Ink Jet Printing Process
- Designing an Ink Jet Ink (Piezo, Continuous & Thermal)
- Properties Influencing Ink Jet Performance
- Typical Performance Issues
- Diagnosing Typical Ink Problems
- Ink Types (Solvent, Aqueous & UV Cure)
- Testing an Ink for Reliability: Methods & Characterization

5:30 p.m. Reception

Tuesday, February 5, 2008

8:30 a.m. Continental Breakfast

9:00 a.m. Session 2

DOD PRINthead DESIGNS AND VENDORS

- Thermal Ink Jet
- Piezo Ink Jet
- Moving Wall Technology

MATERIALS FOR INK JET INKS

- Typical Material Requirements for Successful Ink Jet Printing
- Polymers, Dyes & Pigments
- Pigment Dispersion Technology & Processing Techniques
- Key Suppliers
- Advances in UV Curing Ink Technology
- Formulation Considerations
- Challenges, Properties & Current Performance

DOD PRINthead DESIGN CONSIDERATIONS

- Drop Ejection Frequency
- Crosstalk
- Printhead Life
- Temperature Control
- Drop Placement Accuracy
- Considerations For Page Arrays
- Grayscale Techniques
- Drive Waveforms

12:00 Noon Lunch

1:00 p.m. Session 3

PRINT & IMAGE QUALITY

- Factors Affecting Print Quality
- Technologies to Improve Print Quality
- Improving Image Quality

SYSTEM DESIGN ISSUES

- Nozzle Maintenance
- Drop Detection
- Filling/Bubble Removal
- Ink Supply & Replacement

FUTURE DEVELOPMENTS

- Evolution of Current Technology
- Hardware & Ink Technology Advancements
- Status & Developments of Ink Technology
- Important Future Applications
- Recent & Projected Trends

5:00 p.m. Adjournment

Ink Jet Academy Course Leaders

Dr. Alan L Hudd, President & Chief Technical Officer, Xennia Technology Limited, Letchworth, Hertfordshire, UK

In 1996, Dr. Hudd founded Xennia Technology; the world's first independent contract ink jet technology house dedicated to the industrial and office inkjet industries. Since then, Dr. Hudd has grown Xennia into a leading player in the rapidly emerging market for industrial inkjet technologies. Under Dr. Hudd, Xennia has developed a unique set of inkjet chemistry, engineering and problem solving capabilities that has resulted in a number of important technology innovations, especially in the field of inkjet dispensing of difficult materials.

Prior to establishing Xennia, Dr. Hudd was for 8 years the Fluids Technology Manager at Domino Printing Sciences, developing a wide range of inkjet inks for diverse applications and is credited with a number of patents and significant innovations within the industrial inkjet industry. He spent almost eight years with the Ministry of Defence and Royal Ordnance in the UK, developing new solid polymer rocket propellants for air to air missiles. Dr. Hudd graduated with B.Sc. Honours degree in Chemistry and Physics, M.Sc and Ph.D research degrees in Polymer Chemistry from Manchester University.

Mike Willis, Managing Director, Pivotal Resources Limited, Cambridge, UK

Mr. Willis is Founder and Managing Director of Pivotal Resources, an international marketing technical consultancy specializing in electronic printing and the graphic arts. In addition, he is the publisher of *Directions*, a service which monitors patents, research papers and significant product launches in the electronic printer market.

During the past twenty years, Mr. Willis has been based in Cambridge working as an engineer and consultant for a large number of clients in a variety of roles. For eight years, he was Consultant, then Group Leader of Digital Printing at Cambridge Consultants, a subsidiary of Arthur D. Little. He has led several major development contracts for electrophotographic printers, based on LED and light valve imaging systems, and for the development of a major new office ink jet technology.

In 1990, Mr. Willis was a founder member of Xaar, a company set up to exploit high resolution piezo ink jet technology. He graduated from the Polytechnic of Central London with Honours in Photographic Sciences.

REGISTRATION INFORMATION: 17th Annual Ink Jet Printing Conference & Ink Jet Academy: Theory of Ink Jet Technology



Registration Fees: \$1095 per registrant per program
\$995 for each additional registrant from same company when registered as a group

Each program's registration fee includes attendance at all sessions, all program functions and the program's reference materials. Cancellations will receive a 100% refund if made 72 hours prior to the start of the program. Substitutions may be made at any time. Cancellations made less than 72 hours prior to the start of the program will be charged a \$300 cancellation fee..

To register, submit the registration form with payment to Susan Meldrum, Conference Administrator, Information Management Institute, Inc., 1106 Valley Crossing, Carrabassett Valley, ME 04947 USA. You may reserve space by calling +1-207-235-2225, sending a fax to +1-207-235-2226 or by sending an email message to imi@imiconf.com or registering on our web site www.imiconf.com

REGISTRATION FORM

- 17th Annual Ink Jet Printing Conference**
February 6-8, 2008
- Please reserve me a complimentary display space and a 5-minute Suppliers' Forum slot**
- Ink Jet Academy: Theory of Ink Jet Technology**
February 4-5, 2008

NAME _____

JOB TITLE _____

COMPANY _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

COUNTRY _____

PHONE _____ FAX: _____

EMAIL _____

- I Want to Pay by Credit Card Please Invoice Me

Radisson Resort Orlando-Celebration Information

IMI's **17th Annual Ink Jet Printing Conference & Ink Jet Academy** are being held at Radisson Resort Orlando-Celebration located in Kissimmee, Florida. Hotel reservations are the responsibility of each meeting registrant. **Early booking is advised** as the reduced rate is guaranteed only until January 14, 2008. Phone +1-800-333-3333 (Radisson Central Reservations) or +1-407-396-7000 (Hotel direct) and reference "**INFOMG**" to receive the special group rate of \$114 (including resort service fee) for single or double occupancy.

You can make your hotel reservations online - go to hotel website www.radisson.com/kissimmeetl and

1. Select your desired arrival and departure dates and hit "Go" which will take you to the next page
2. Fill in "**INFOMG**" in the "Promotional Code" field under "Search for Special Rates" and then hit "Search" which will take you to the IMI Rates where you can make your selection and complete the reservation process.

The Radisson Resort Orlando – Celebration is located on 20 acres of beautiful tropically landscaped grounds just 1.5 miles from Walt Disney World Resort. Guests can unwind at a giant free-form swimming pool with waterfalls and a water slide. The Radisson Resort Orlando - Celebration also offers another heated pool, a kids' wading pool, lighted tennis courts, sand-based volleyball, a playground, a game room, jogging areas and a fitness center. In addition, the Radisson Resort Orlando - Celebration provides shuttle service to Disney World, Sea World and Universal Studios.

Adjacent to Radisson Resort Orlando - Celebration is Celebration Golf Club, an 18 hole championship caliber course designed by Robert Trent Jones, Sr. and Jr. and located within the natural wetland environment.

All checks should be in U.S. dollars drawn on a U.S. bank and made payable to Information Management Institute, Inc. An invoice with bank transfer details for IMI's U.S. or European bank account will be provided upon request.

Don't Miss IMI's Other Upcoming Programs

3rd Engineered Fine & NanoParticle Applications Conference

January 28-30, 2008
Radisson Resort Orlando-Celebration
Kissimmee (Orlando), Florida

11th Annual Toner & Toner Chemicals Conference

January 30-February 1, 2008
Radisson Resort Orlando-Celebration
Kissimmee (Orlando), Florida

Digital Printing Presses - The Next Era Conference

February 4-6, 2008
Radisson Resort Orlando-Celebration
Kissimmee (Orlando), Florida

Ink Jet As A Manufacturing Process Symposium

April 14-15, 2008
Renaissance Denver Hotel
Denver, Colorado

Ink Jet Academy: Theory of Ink Jet Technology

April 14-15, 2008
Renaissance Denver Hotel
Denver, Colorado

Ink Jet Technology Suppliers' Showcase 2008

April 16-18, 2008
Renaissance Denver Hotel
Denver, Colorado

19th Annual Thermal Printing Conference

May 19-21, 2008
Arizona Golf Resort Hotel & Conference Center
Mesa, Arizona

2nd Annual RFID Technology Integration Symposium

May 21-22, 2008
Arizona Golf Resort Hotel & Conference Center
Mesa, Arizona

Digital Printing Summer Camp 2008

July 28-August 1, 2008
Specific Courses to be Announced
Sugarloaf Hotel
Carrabassett Valley, Maine, USA

Visit www.imiconf.com
for
updated program and registration details