

Digital Printing World 2010 Conferences

Crowne Plaza San Marcos Resort
Chandler (Phoenix), Arizona



13th Annual Toner Printing Conference

February 1-3, 2010

21st Annual Thermal Printing Conference

February 1-3, 2010

Ink Jet Academy: Theory of Ink Jet Technology

February 1-2, 2010

19th Annual Ink Jet Printing Conference

February 3-5, 2010

For the first time, *IMI's Digital Printing World 2010 Conferences* groups all three of its annual digital printing primary technology conference programs during the same week. IMI's programs are designed to enable attendees to obtain the latest technical, market and application information while allowing time to network with other attendees in a time and cost efficient manner. Attendance at IMI conferences enables attendees to meet with the digital printing industry's leading experts in a single location in a short time period maximizing information transfer efficiency and minimizing travel and time expenses.

While conventional printing declines, digital printing offers personalization, cost savings, improved output options and other opportunities to end users as the transition from an analog to digital world accelerates – which is being reflected in the growth of digital printing applications and opportunities. *IMI's Digital Printing World 2010 Conferences* provides programs and formats to obtain a timely update and understanding of key digital printing technologies, markets and applications which are key to your product and market success.

Complimentary Conference Displays & Suppliers' Forum

IMI's Digital Printing World 2010 Conferences provide the opportunity to have complimentary display space to exhibit your products, technology or services and 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 fees to have a display and/or to give a Suppliers' Forum presentation.**

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



13th Annual Toner Printing Conference

Crowne Plaza San Marcos Resort
Chandler (Phoenix), Arizona

February 1-3, 2010

IMI's **13th Annual Toner Printing Conference** focuses on technology, market and applications challenges & opportunities facing the toner industry. Dry and liquid toners have been integral imaging materials for over fifty years. These toners have evolved in properties, composition and production over that period. During the past fifty years, other imaging techniques have been introduced, but only ink jet has proven to have the combination of image quality, economics and versatility to seriously challenge toner-based imaging devices.

Improved print quality, expanding applications, higher resolutions, enhanced user expectations, etc. are all requiring improved toner based products to effectively compete in the digital printing marketplace. Additionally, the increased adoption of color digital printing, introduction of chemically produced toners, movement away from light lens based copiers, etc. are all placing new requirements on the toner industry. These improvements all require new or improved chemical raw material products to meet users' requirements as toner based imaging continues to evolve in a competitive marketplace.

This unique conference program, IMI's only 2010 program focused on the toner and toner raw materials industry, offers an excellent opportunity for raw materials suppliers, imaging chemicals manufacturers, hardware developers and end users to join together and obtain a comprehensive assessment of the toner based imaging chemicals industry. There simply is not a better or more cost effective place to obtain the latest information defining **the future of toner and toner raw materials**.

13th Toner Printing Conference Speakers

Tom Ashley, Pivotal Resources USA
Krishna Chaurasia, Fenner Precision
Marc Cousoulis, Lexmark International
Terry Frazier, Madison Advisors
Mark Hanley, I.T. Strategies

Dr. Gordon Hardy, Hunt Imaging
Tom Patnaik, Hosokawa Micron Powder Systems
Velliyur R. Sankaran, Sankaran Consulting
John Shane, InfoTrends
Terry Stauffer, Malvern Instruments
Devon Strain, Lexmark International

Monday, February 1, 2010

11:00 a.m. Registration

1:30 p.m. Opening Session
Toner Industry in Perspective

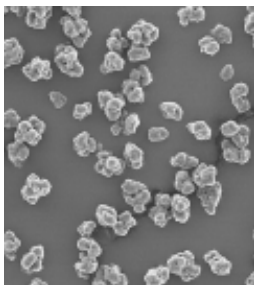
Welcome & Introductions

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

EVOLUTION OF ELECTROPHOTOGRAPHIC TECHNOLOGY AND THE IMPACT ON TONER DESIGN

Marc Cousoulis, Color EP Technology, & Devon Strain, Color Toner Development, Lexmark International Inc., Lexington, Kentucky

- Market Changes (Enterprise/Production)
 - Speed
 - Energy Requirements
 - Cost per Page
- EP Engine Development Trends
 - Minimal Mechanical Energy Toning Stations
 - Low Power Consumption EP Modules
 - Long Life Components
- Toner Technology Advances
 - Milled vs. CPT
 - Resin (Sa to Polyester)
 - External Additives



CHINA CIRCULAR ECONOMY LAW

Velliyur R. Sankaran, President, Sankaran Consulting, Livermore, California

- New China Circular Economy Law Effective January 1, 2009
- Law's Aim is to Boost Sustainable Development through Energy Savings & Reduction of Pollutant Discharges
- Circular Economy Derives from Familiar Resource Recovery Logo "Reduce—Reuse—Recycle"
- Law Administered by Ruling State Council
 - Establishes Rules & Regulations for Conserving Materials & Energy, Recycling Wastes, Repairing & Reusing Certain Electronic Wastes, Prohibits Imports of Certain Items and Protecting Against Toxic Waste Disposal
 - Sponsors Research to Promote Science & Technology and to Earn Support of international Community on Development of a Circular Economy
- Current Activities & Status
- Potential Impact on Toner Industry

5:30 p.m. Networking Reception in Display Area

Tuesday, February 2, 2010

8:00 a.m. Breakfast

9:00 a.m. Session 2

Raw Materials Innovations to Enhance Market Development

TONER RESINS: TODAY'S TECHNOLOGIES & TRENDS

Dr. Gordon Hardy, Research Specialist, Hunt Imaging, Berea, Ohio

- Function & Properties
- Performance Characteristics
- Polymer Chemistry
- Recent Patents
- Crystalline Polyesters
- Polymers from Renewable Resources
- Biodegradable Toners
- Future Trends

MEASURING TONER PARTICLE SHAPE & ITS IMPACT ON PRINT QUALITY

Terry Stauffer, Imaging Specialist, Malvern Instruments, Gilbert, Arizona

- Particle Size & Shape are Critical Toner Parameters
- Cross-section of Size & Shape Specifications Found in Patents
- How These Values are Obtained
- Measurement of Size & Circularity
- Impact of Measurement Technique on These Values

12:00 Noon Luncheon

1:30 p.m. Session 3
Toner Printing Production Advancements

ROUNDING AND POST-BLENDING OF TONER PARTICLES

Tom Patnaik, Applications Engineer, Hosokawa Micron Powder Systems, Summit, New Jersey

- Toner Particles (both Conventional & Chemical) are Getting Smaller and Shape is Playing Greater Role in Effective Image Transfer
- Toner Particle Proper Circularity Factor & Effective Distribution of Additives on Surface Makes all the Difference in Final Print Quality
- Innovative, High-speed, High-shear Mixer Used in Toner-rounding & Post-blending of Additives to Black & Color Toner
- Before- & After-rounding Photos
- Dynamics that Make Mixer Effective & Indispensable Tool in Modern-day Toner Manufacturing Operation

WHAT THE OEM MUST KNOW ABOUT POLYURETHANE ROLLERS IN TONER BASED PRINTING SYSTEMS

Krishna Chaurasia, R&D Manager, Fenner Precision, Mannheim, Pennsylvania

- Defining Optimum Polyurethane Material for Rollers is Challenging for Printer OEMs – Generally they rely on Manufacturing Partner's Expertise
- Known Polyurethane Properties which must be Considered in Roller Specifications
- Defining Properties Allows OEMs to Know what to Expect from Products
- Understanding your Manufacturing Partner

Suppliers' Forum: 5-Minute Presentations related to Toner and Toner Materials Technology, Product or Service Capabilities. The Suppliers' Forum is open to all Conference Registrants

5:30 p.m. Networking Reception in Display Area

Crowne Plaza San Marcos Resort

The Crowne Plaza San Marcos Resort (www.SanMarcosResort.com) is located on 123 acres of beautiful landscaped grounds in downtown Chandler conveniently located just twenty minutes southeast of Phoenix Sky Harbor International Airport.

The resort lies in the heart of Historic Downtown Chandler, Arizona, one of the fastest-growing communities in US. The city was founded in 1912 by Dr. Alexander J. Chandler, the original owner of the San Marcos. He began building the property in 1912, the same year Arizona traded in its Territorial status to become the nation's 48th state.

The Crowne Plaza San Marcos Resort was the first golf resort in Arizona, and has been a landmark ever since its 1912 debut. Located in the historic district of downtown Chandler (www.downtownchandler.org), it offers restaurants and shopping just steps from the resort. The 295 guestrooms and hotel suites are exquisitely furnished and comfortably decorated. Each room features a private patio or balcony that overlooks luxuriously landscaped courtyards and provide office accoutrements the business traveler will find helpful, like a large writing desk, complimentary in-room internet and dual voice-mail equipped telephones plus Crowne Plaza's Sleep Advantage program (encompassing new bedding, guaranteed wake-up calls, designated quiet zones, night lights, drape clips, sleep CDs, sleep tips and amenities such as eye masks, ear plugs, lavender spray and a new level of comfort with 7 pillows, a plush duvet, and luxurious sheets).

Special conference golf rates are:

\$79.00 including green fees and cart for Friday-Sunday
\$69.00 including green fees and cart for Monday - Thursday

Wednesday, February 3, 2010

8:00 a.m. Breakfast

9:00 a.m. Session 4

**Future Toner Industry
Requirements, Challenges & Opportunities**

ELECTROPHOTOGRAPHIC PRINTING MARKET FORECAST 2008-2013

John Shane, Director, Communication Supplies Consulting Service U.S and Europe, InfoTrends, Weymouth, Massachusetts

- Machine Installed Base, Print Volume & Supplies Forecast
- Short & Long Term Impacts of the Recession
- Impact of Managed Print Services on Print & Suppliers
- Evolving Need for Print
- OEM vs. Aftermarket Update

ARE OFFICE PRINT & COPY VOLUMES REALLY DECLINING?

Tom Ashley, Director, Pivotal Resources USA, Kentucky

- Print in Today's Digital World
- Print in the Office
- Print & Reading
- Long Term Trends vs. the Recession
- Printing Around the World

PRINT SUPPRESSION MARKET STUDY

Terry Frazier, Principal Analyst, Madison Advisors, Colleyville, Texas

- Print Suppression Study of Fortune 500 Companies
 - Banks & Credit Cards
 - Financial Services & Brokerage
 - Insurance (P&C)
 - Utility & Telcom
- Business Drivers: Why Businesses are Pursuing Print Suppression
 - Cost Drivers
 - Outsourcing vs. In-plant
 - Electronic vs. Print Messaging
- Adoption Strategy - Moving Consumers to Electronic Distribution: Messaging Methods & Effectiveness
- Market Drivers: Adoption Rates & Economic Impact
 - Current Suppression Rates
 - Short Term & 5-year Goals
- Potential Impacts on Printing Industry
 - Multi-channel Opportunity
 - Marketing vs. Transactional Suppression
 - Suppression Impact Scenarios

CHALLENGES TO TONER BASED PRINTING'S DOMINANT MARKET POSITION

Mark Hanley, President of Marco Boer, Consultant, I.T. Strategies, Hanover, Massachusetts

- High Speed Ink Jet in Transactional Markets as A Bridge to Full Scale Graphic Arts Challenge
- Industrial Printing Applications: Opportunities & Challenges
- Who Stands to Gain Among the EP Vendors?

12:00 Noon

Adjournment



The San Marcos Golf Course is where it all started for Arizona. This 18-hole, 6,626-yard course opened in 1913 and was seeded with Bermuda grass shortly thereafter, making it the first golf course in Arizona with grass greens. Over the decades, presidents, dignitaries, and celebrities have enjoyed the lush setting and challenging play offered at this traditional course. You'll find an enjoyable course nestled in the midst of an impressive property that's listed on the National Register of Historic Places. But the property has undergone a renaissance with more than a \$4-million renovation. In addition to golf, the resort features two restaurants, two lounges and a huge heated swimming pool.



21st Annual Thermal Printing Conference

Crowne Plaza San Marcos Resort
Chandler (Phoenix), Arizona

February 1-3, 2010

IMI's **21st Annual Thermal Printing Conference** provides the most comprehensive thermal industry coverage ever. Key worldwide thermal market sectors will be reviewed from supplier, channel sales and end-user perspectives. Advances in wireless communications, hand held devices and web-hosted software that represent driving market forces in distributed printing will be presented in the context of their likely impact in thermal markets. Innovation and compliance initiatives that represent new growth drivers for direct thermal and thermal transfer usage will be presented from an application perspective along with the latest events and advances in photographic quality printing and thermal printhead technology. Finally a review of thermal industry sales channel dynamics, worldwide capacities and the impact of the current worldwide economic slowdown will cap off this comprehensive conference.

21st Annual Thermal Printing Conference Chairman

Harold Schofield, Schofield Imaging Associates, LLC

21st Annual Thermal Printing Conference Speakers

Hidekazu (Henry) Akamatsu, Kyocera
Steve Allard, FLEXcon
Tracey S. Chernay, TransAct Technologies
Walter Deacon, Boston Retail Partners
Dr. Daniel J. Harrison, IIMAK
Ken Koldan, AIM North America & FLEXcon

Charles E. Mara, Consultant
Jiro Oi, HIT Devices
Richard H. Ward, Buena Vista Resources
Hiroyoshi Sakaguchi, Rohm Co., Ltd.
Om Srivastava, Gulton
Dr. James R. Williams, Polyonics

Monday, February 1, 2010

11:00 a.m. Conference Registration

1:30 p.m. Opening Session

Global Thermal Printing Industry

Welcome & Introductions

Alvin G. Keene, President, Information Management Institute, Inc.,
Carrabassett Valley, Maine
Harold Schofield, Schofield Imaging Associates, Narragansett, Rhode Island

STATE-OF-THE INDUSTRY ADDRESS & COMPREHENSIVE WORLDWIDE THERMAL PRINTING SURVEY

Harold Schofield, Schofield Imaging Associates, Narragansett, Rhode Island

- Conference Overview
- Industry Update For 2009
- Results of New Worldwide Thermal Printing Survey
 - Revenues
 - Growth
 - Competition by Market Segment
- Technology Update For 2009
 - Printheads & Media
 - Impact of Communications Trends & Related Technologies
 - Products & Systems
- Supply Chain Trends
 - OEM vs. Aftermarket Sales
 - Emerging Markets
- Competitive Outlook
 - Advancements in Ink Jet & Electrophotography
 - Soft Displays vs. Hard Copy
- Future Trends

THE UID LABEL: A NICHE MARKET FOR THERMAL TRANSFER

Charles E. Mara, Consultant, Concord, Massachusetts

- Niche Market for Unique Item Identification (UID): Dept. of Defense Mandate
- Typical UID Label
- This Label is "Tip of an Information Iceberg"
- What Information Does the UID Label Contain?
- Graphic & Logical Construction
- Composing & Validating the Content
- Verification of Print Quality
- Thermal Transfer Materials: Polyester, Metalized Polyester, Polyimide & Fabric Composition
- Alternative Label Materials & Technology
- Technology & Requirements References

TRENDS IN RETAIL IT AUTOMATION & MERCHANDISING AND THEIR IMPACT ON POINT-OF-ISSUE TRANSACTION DOCUMENTS

Walter Deacon, Principal, Boston Retail Partners, Boston, Massachusetts

- Current Trends in Retail & Retail Technology
 - Retail's Response to Current Economic Conditions
 - Information Technology: Tactics & Strategy
 - Results from Boston Retail Partners Annual Retail POS Survey
- Retail Supply Chain Trends
 - Impact on Warehouse & Distribution
 - Product Flow – "Floor Ready"
 - Tags & Label Trends
- Future Outlook
 - Cost Management & Control
 - POS Receipts & Coupons
 - Opportunities for Value Added Services
 - Cross Promotional Selling
 - Customer Relationship Management

5:30 p.m. Networking Reception in Display Area

Tuesday, February 2, 2010

8:00 a.m. Breakfast

9:00 a.m. Session 2
Direct Thermal & Thermal Transfer Technology Advancements

THERMAL IMAGING INNOVATIONS

Dr. Daniel J. Harrison, Senior VP R&D, IIMAK, Amherst, New York

- Direct Thermal Imaging
 - Thin Films
 - High Durability
 - New Applications
- Conductive Inks
 - Digital Printing with Thermal Transfer Ribbon
 - Applications: Membrane Keyboard, Flex Circuits & RFID
- Flexible Packaging
 - Market Growth
 - Thermal Transfer vs. Ink Jet
 - Smart Packaging
 - New Net Flex Thermal Transfer Ribbon
- Ultra-Durable Resin Thermal Transfer Ribbon
 - Chemical Durability for Demanding Applications
 - New SP-990 Ultra-Resin TTR (Substrate Latitude, Printer Energy & Chemical Resistance Capability)

THERMAL PRINTING FILMS

Steve Allard, Product Manager, FLEXcon, Spencer, Massachusetts

- Thermal Printing Film Market
- Durable vs. Non-Durable Thermal Applications
- Trends in Thermal Print Film Applications

THERMAL PRINTING'S ROLE IN AUTO ID, BAR CODE & RFID

Ken Koldan, AIM Representative & Business Development Manager, FLEXcon, Spencer, Massachusetts

- AIM & UID Supplier Alliance Introduction
- What is UID & Why is it Important?
- What are the Major Marking Methods (RFID, Thermal Print, etc.)?
- Trends in Thermal Film Market including Federal Government Electronics

12:00 Noon Luncheon

1:30 p.m. Session 3

Thermal Printhead Technology Developments

ADVANCED TECHNOLOGY PRINTHEADS

Hidekazu (Henry) Akamatsu, Manager of Application Engineering, Thermal Printhead Division, Kyocera Corporation, Kagoshima, Japan

- EcoGeneration & Split Heater Construction for Barcode Applications
- KLE Printhead for Card Printing Applications
- Ultra High Resolution Printheads

DEVELOPMENT & USAGE KAIZEN OF LARGE FORMAT (A-3) HEATING HEAD

Jiro Oi, Director, HIT Devices, US Office, Brentwood, Tennessee

- What Is It?
- Why Do We Need this?
- What is the Merit of This Over Currently Available Products?
- How Can it Be Used?
- Who Can Take Advantage of This Product?
- How Can You Obtain More Information?

PRINthead TECHNOLOGIES FOR NEXT GEN THERMAL PRINTERS

Hiroyoshi Sakaguchi, Design Engineer, Printhead Division, ROHM Co., Ltd., Kyoto, Japan

- Market Trends
- Printhead Technologies for New Generation Thermal Printers

THERMAL PRINthead AFTERMARKET

Om Srivastava, President, Gulton, South Plainfield, NJ

- Why is there an Aftermarket?
- Markets Served
- Market Trends
- Aftermarket Size & Trends
- Gulton's Role in Aftermarket

Suppliers' Forum: 5-Minute Presentations related to Thermal Printing Technology, Product or Service Capabilities. The Suppliers' Forum is open to all Conference Registrants

5:30 p.m. Networking Reception in Display Area

Benefits of Conference Participation

- Participate in the only 2010 U.S. conference programs devoted solely to toner, thermal and ink jet technologies, applications and markets
- Explore the key issues important to your understanding of all major digital printing technologies with your counterparts from all sectors of the digital printing industry
- Establish personal contacts with leading technologists, managers and innovators in the digital printing industry
- Gain knowledge on the latest developments and market opportunities
- Learn from interactive sessions and informal discussions of technology trends, applications developments and other aspects digital printing
- Obtain critical insights into technological, application and market developments critical to your company's decisionmaking process relative to toner, thermal & ink jet printing and their role in the overall printer marketplace
- Hear industry expert's projections for digital printing opportunities in traditional and growth markets
- Have a **complimentary display space** to inform the industry of your products and services
- Give a five minute presentation during the popular **Suppliers' Forum Session**.

Wednesday, February 3, 2010

8:00 a.m. Breakfast

9:00 a.m. Session 4
Future Trends & Opportunities

TRANSACTIONAL APPLICATIONS & MARKETS

Tracey S. Chernay, Sr. Vice President Sales & Marketing, TransAct Technologies, Inc., Hamden, Connecticut

- Transactional Printing Applications Requirements
- Market Drivers & Barriers
- Role of Thermal Printing
- Technology Innovations & Advancements
- Printing Solutions for Gaming, Lottery, Banking, Hospitality & Other Applications

MARKETS FOR THERMAL PRINTING OF SECURITY DOCUMENTS

Richard H. Ward, Principal and Managing Member, Buena Vista Resources LLC, Buena Vista, Colorado

- Markets & Unmet Needs in Thermal Printing of Secure Documents
- Types of Needs that Already Exist
- Emerging Requirements
- Gaps in Product Availability & Market Segments
- Market Segments
- Substitute Technologies Replacing Thermal Documents
- Needs for Secure Thermal Printing
 - Numerous Markets & Sub Markets
 - Some Large
 - Some Very Specialized

THERMAL TRANSFER PRINTING: A TECHNOLOGY LEADER FOR SOLVING NEW APPLICATIONS DEVELOPMENT PROGRAMS

Dr. James Williams, Founder & Chairman, Polyonics Inc., Westmoreland, New Hampshire

- Unique Characteristics vs. Other On-Demand Technologies
- Unique Abilities to Solve New Applications Requirements
- Product Identification "on the shop floor" vs. "off-site situations"
- Specific Examples Highlighting
 - Resistance to Harsh Environments
 - Printable Electronics
 - Brand Protection/Anti-counterfeiting Technologies
- Unique Process Step of Simultaneously Heating the Ink & Receiver Sheet
 - Enable Dye Sublimation Printing
 - Taking Advantage of "Binary Chemistry" between Receiver Sheet & Ribbon
- Technology Trade-off vs. Other Printing Technologies
- Thermal's "Sweet Spot"
- Thermal Printing for 21st Century Manufacturing

12:00 Noon Adjournment



Register Online Now
www.imiconf.com



19th Annual Ink Jet Printing Conference

Crowne Plaza San Marcos Resort
Chandler (Phoenix), Arizona

February 3-5, 2010

IMI's unique **19th Annual Ink Jet Printing Conference** is the only 2010 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 **19th 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.

19th Annual Ink Jet Printing Conference Co-Chairmen

Dr. Ross N. Mills, Vexajet & Mike Willis, Pivotal Resources

19th Annual Ink Jet Printing Conference Speakers

Tom Ashley, Pivotal Resources USA
Clive Ayling, TTP
Rob Beeson, Hewlett Packard,
Guy Broadhurst, Oce North America
John Carroll, Industrial Inkjet
Daniel B. Denofsky, Eastman Kodak
Luigi M. DeVito, Stork Veco

Mark Hanley, I. T. Strategies
Dr. Alan L. Hudd, Xennia
Victor P. Janule, Chem-Dyne Research
Masayuki Kano, Sony Corporation
Yair Kipman, ImageXpert
Dr. John J. Kuta, EXFO
Chris Lynn, Xaar America
Alan Mills, Nordson UV

David Murphy, Riso
Bryan Palphreyman, Sensient Colors UK
Stewart Partridge, Chimigraf Asia-Pacific
Clayton Sampson, Cyan Group
Martin Schoeppler, FUJIFILM Dimatix
Mark Thackray, Imtech
Peter Walshe, SunJet

Wednesday, February 3, 2010

11:00 a.m. Registration

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

Welcome & Introductions

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

Conference Co-Chairmen:

Dr. Ross N. Mills, President, Vexajet, Boulder, Colorado

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

INK JET MARKETS: SIZE, STRUCTURE & TRENDS

Mark Hanley, President or Marco Boer, Consultant, I.T. Strategies, Hanover,
Massachusetts

- Consumer, Office & Production Documents Markets
- Wide Format
- Labels & Packaging
- Applications Development Trends: Ink Jet as A Manufacturing Process



IMAGE QUALITY STILL COUNTS: HP's WRITING SYSTEM APPROACH

Rob Beeson, R&D Competitive Intelligence Team Leader, Hewlett Packard,
Corvallis, Oregon

- Ink Jet has Successfully Challenged more Mature Technologies & Won Market Share over Past 25 Years
 - Meeting Mono Quality & Introducing Color was late 80's Emphasis
 - Much of 90's spent successfully Challenging Silver Halide as Photographic Choice & Improving Plain Paper Color
 - As we finish 1st decade of 21st century, Conversion to Digital Printing is well underway & Offset Printing is being Conquered by Ink Jet
- HP A Leader by taking a Writing System Approach where Ink, Printhead, Media & Printing Architecture all play Important Roles in Printing Solution
- Image Quality has always taken Center Stage of Development Efforts
 - UIQ: Ultimate Image Quality Originally used for Early Development Goals
 - PIQ is Better Metric: Permanent, Professional, Practical, Portable & Profitable
- How HP has Designed Products to Address these PIQ Attributes
- ColorLok Paper is Good Example of how One Industry can help Raise the Image Quality Bar for all Ink Jet Products

WHAT'S NEW IN DESKTOP INK JET MARKET

Tom Ashley, Director, Pivotal Resources USA, Kentucky

- Desktop Printers
 - Latest Products from the OEMs
 - Recent Technology Advances
 - Marketing Strategies
- Inks & Media
 - Dyes, Pigments & Chemistry
 - Inks & the Environment
 - Media Developments
- Original vs. Aftermarket Supplies
 - Trends in Suppliers Markets
 - Litigation Continues
 - Ever-Changing Laws

TRANSITION OF BOOK PUBLISHING FROM ANALOG TO DIGITAL & HOW STREAM INKJET TECHNOLOGY ACCELERATES THAT TRANSITION

[Daniel B. Denofsky](#), Director, Future Product Marketing, Inkjet Printing Solutions, Eastman Kodak Company, Dayton, Ohio

- Market Overview of Book Publishing
- Digital Technologies Provide Significant Benefits in Terms of Supply Chain Efficiencies
- Critical Digital Printing Technology Factors of Print Speed, Image Quality & Running Costs
- Stream Inkjet Technology: an Ideal Technology to Accelerate Transition to Digital Book Printing
- Updates on Stream Inkjet Technology

OPPORTUNITIES & CHALLENGES FOR INK JET IN DIGITAL FABRICATION

[Dr. Ross N. Mills](#), President, Vexajet, Boulder, Colorado

- Ink Jet in the Printing World
- Traditional Printing vs. Digital Fabrication
- Special Requirements
- The Complete Solution
- The Future for Ink Jet & Digital Fabrication

THE ROUTE TO INK JET INDUSTRIALIZATION: FROM DESKTOP TO HEAVY DUTY MANUFACTURING

[Dr. Alan L Hudd](#), President & Chief Technical Officer, Xennia Technology Limited, Letchworth, Hertfordshire, UK

- Ink Jet for Industrial Applications
- The Ink Jet Proposition for Decoration & Functional Deposition in Production Environments
- Current Ink Jet Technology Offerings: Progress & Limitations
 - Printheads
 - Chemistry
 - Ink Jet Integration – Ink Jet Modules
- Achieving Productivity & Reliability: Addressing the Ink Jet Compromise
- Ink Jet: Transforming Traditional Industries
 - Textiles
 - Ceramics
 - Packaging

6:30 p.m. Networking Reception in Display Area

Thursday, February 4, 2010

7:30 a.m. Breakfast

8:30 a.m. Session 2

Technology Advancements

THE LATEST INDUSTRIAL INK JET PRINTHEADS

[Clive Ayling](#), Consultant, TTP, Royston, Hertfordshire, UK

- Recently Released Powerful Industrial Ink Jet Printheads
 - Dimatix Q-class
 - Kyocera KJ4
 - Toshiba TEC CF1
- Where they are being Adopted
- How Meteor Electronics & Software Supports their Adoption
 - Time-to-market & Reliability through Proven Hardware
 - Datapath Software & Speed that Supports Demanding Applications
- How to Optimize their Waveforms for good Greyscale Drop Formation

SONY'S LD SHOT (LINEAR DEFFLECTION) PRINthead TECHNOLOGY

[Masayuki Kano](#), R&D Planning Manager, Printer Business Division, B2B Business Solutions Group, Sony Corporation, Kanagawa, Japan

- Single-pass Technology Begins to be Implemented mainly for Enterprise Inkjet Printing Systems
- Also for Lower Cost Systems-the Potential Demands for Compact Single-pass Solution may exist
- Sony, an Experienced Industrial Printing Engine Supplier is Developing a New Technology to Meet the Demand
 - "LD Shot" Printhead Technology: A Method to Control Jetting Direction
 - Uniqueness: Easy Single-pass Implementation, Compact, Low-cost & Photo Quality

TECHNOLOGIES OF THE FUTURE - SEEING OVER THE HORIZON

[Mike Willis](#), Managing Director, Pivotal Resources Ltd., Cambridge, UK

- Are Patents a Good Way to Understand Technology Trends?
- Distinguishing between Likely Developments & Red Herrings
- Trends in Ink Jet Patent Filings
- Latest Developments
 - Silverbrook & MEMJET
 - Page Array Technologies
 - New Ink Chemistries
- What Might the Future Ink Jet Industry Look Like?

PRINTING ON NON-POROUS SUBSTRATES WITH THERMAL INK JET

[Mark Thackray](#), R&D Engineering Manager, ImTech, Corvallis, Oregon

- Solvent & UV Curable Inks for HP45 TIJ Printheads for Printing on Non-porous Substrates
- Technical Challenges
 - Material Compatibility
 - TIJ Jetting Performance
 - Ink/Media Substrate Interactions
- Future Development Trends

ANALYSIS OF INKJET PROCESSES AND PRINT QUALITY FOR SOLAR AND OTHER PRINTED ELECTRONICS APPLICATIONS

[Yair Kipman](#), President, ImageXpert, Nashua, New Hampshire

- JetXpert: Camera & Strobe-based System for use in Analysis of Drops in Flight, Supporting Fluid Development & Printing System Optimization
- Camera & Scanner-based Systems to Assess Print Quality & Material Interactions: Flexible Options for Part & Print Inspection
- Specialized Camera Options for Functional Testing & Defect Detection

ELECTROFORMING MANUFACTURING TECHNOLOGY FOR INK JET NOZZLE PLATES

[Luigi M. DeVito](#), Business Development, Stork Veco NV, Eerbeek, The Netherlands

- Electroforming Technology
- Range of Applications & Functionalities
- Application to Ink Jet Nozzle Plates

12:00 Noon

Luncheon

1:30 p.m.

Session 3

Consumables: Lifeblood of the Industry

THE FUTURE OF INK JET INKS – WHERE NEXT?

[Peter Walshe](#), Business Development Manager, SunJet, Bath, UK

- Evolution of Jetting Technology & Formulation
- Is UV Really a Cure-All?
- Applications Review
- Ink Jet & Printed Electronics
- Main Challenges for Ink Formulation, Printheads & Integration

DYNAMIC SURFACE TENSION FINGERPRINTS' ROLE IN SUCCESSFUL INK FORMULATIONS

[Victor P. Janule](#), Chem-Dyne Research Corporation, SensaDyne Instrument Division, Mesa, Arizona

- Ink formulators & Users must understand Principles & Relationships of Surface Tension & Surface Energy or "Wetting Tension"
- Formulation & Coating Problems can be greatly mitigated by Measuring Dynamic Surface Tension Fingerprints
- Ink Formulators can Improve Transfer, Spreading & Adhesion of inks by choosing Surfactant & Additive Combinations that provide the Best Surface Tension Profiles
- Methodology for Obtaining & Utilizing Dynamic Fingerprints

THE TAMING OF THE PHOTON FOR CONSISTENT UV DIGITAL PRINTING PROCESSES

[Dr. John J. Kuta](#), Director of Business Development, EXFO Life Sciences and Industrial Division, Mississauga, Ontario, Canada

- Role of UV Light Sources on UV Ink Jet Print Quality
 - Full Cure
 - Pinning
- Properties of UV Light Sources that Influence Print Process Consistency
 - Types of Sources & their Properties
 - Impact on Process Consistency
- Radiometry: Why isn't Measuring Light Straight Forward?
- Existing UV Process Control Options for Integrators & Digital Printers

Register Online Now
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UV LED: The Good, The Bad & The Truth

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

- UV LED Overview
- UV LED's vs. Traditional Arc Lamps
- Advantages of UV LED Technology
- What Affects their Performance?
- Restrictions to the Use of UV LED Technology

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

6:30 p.m. Networking Reception in Display Area

Friday, February 5, 2010

7:30 a.m. Breakfast

8:30 a.m. Session 4

Integration & Implementation for Real World Applications

THE PARADIGM SHIFT TO SINGLE-PASS

Martin Schoeppler, CEO & President, FUJIFILM Dimatix, Inc., Santa Clara, California

- Stepped-up Product Development in Spite of Economic Uncertainty
- Leveraging & Enhancing Earlier Successes (Systems Integration, Materials Deposition, OEM)
- More Products Introduced than Ever Before
- Bridging a Path to Single-Pass
- Full Single-Pass Jetting Technology

ARE ADVANCED MULTI-DISCIPLINARY INTEGRATORS THE KEY TO INDUSTRIAL INKJET MARKETS?

Clayton Sampson, Managing Director, Cyan Group, Yarnton, Oxford, UK

- Inkjet's Penetration of Graphics Markets has been the Inkjet Story of the Decade – But Where Next?
- Is Inkjet Poised to Take on New Industrial Product Markets?
- Evolution of Inkjet Integrator Towards New Markets
- Cultural Issues in the Non-print Industrial Sectors
- Multi-disciplinary Profile Required by the Industrial Integrator
- Unlocking the Future of Inkjet in the Industrial Context

CRITICAL SUCCESS FACTORS FOR SINGLE-PASS UV INK JET PRINTING

Chris Lynn, VP Sales & Marketing, Xaar Americas, Inc., Marietta, Georgia

- Ink Jet has become a Viable Printing Technology
- Success Requires Many Challenges to be Overcome
- Many Disciplines Required to Place Millions of Drops on Web/Product every Second with Accuracies of a few tens of microns or better: Precision Mechanical & Electrical Engineering, Image Science, Physical Chemistry & Fluid Dynamics and More
- Key Factors Influencing Quality Ink Jet Printing & How to Get Them Right
 - Choice of Ink & Printhead
 - Mechanical Setup
 - Image Processing
 - Ink/Substrate Interaction
 - Curing

SPECIAL NOTICE

WORLDWIDE PRINTER AND SUPPLIES MARKET REPORT TO BE PROVIDED TO ALL **DIGITAL PRINTING WORLD 2010** CONFERENCE REGISTRANTS

Information Management Institute, Inc. is pleased to announce that it has commissioned I T Strategies of Hanover, Massachusetts to prepare a confidential study report entitled **"Worldwide Printer and Supplies Market Report"** for distribution to all registrants to IMI's programs.

This exclusive market report is updated on an ongoing basis and provides a source of market information based on a consistent methodology and reporting structure. The report authors, I T. Strategies, generate this report from their worldwide model of the printer industry.

All registrants to the **IMI's Digital Printing World 2010 Conferences** on February 1-5, 2010 at the Crowne Plaza San Marcos Resort in Chandler, Arizona will receive a complimentary copy of the latest edition of the **"Worldwide Printer and Supplies Market Report."**

INK JET PRINTING FOR PERMANENT DECORATION OF CERAMICS & GLASS

Stewart Partridge, Asia Pacific Sales Director, Chimigraf, Singapore

- Market Expectations: Why "First Generation" Digital Could Not Deliver
- Technology Challenges for Ink Jet for Ceramics & Glass Decoration
- Market Sizing: The Global Opportunity
- Emergence of Industrial Solutions: Project Design, Partnering & Technology
- Current Solutions for Permanent Decoration
- Potential Future Directions in Ceramic & Glass Decoration
- Examples & Samples of Ink Jet Decorated Ceramic Tiles & Glass

MID-VOLUME PRODUCTION COLOR GAP: WHERE DOES INKJET FIT?

David Murphy, Vice President of Marketing, Riso, Inc., Danvers, Massachusetts

- Alternatives in the Mid-volume Production Color Space: Where is the Gap?
- Applications for Cut-sheet Inkjet
- Buying Criteria: Cost, Productivity, Efficiency & Quality

INKJET: NOT JUST FOR LABELS!

John Corral, Managing Director, Industrial Inkjet, Cambridge, UK

- Recent Change of Focus in Ink Jet Applications
- Other Markets Areas for 1-Pass Inkjet: Product Decoration, Security & Active Materials
- Key Technical Requirements: Ink/Materials Interaction, Accuracy & Reliability
- Relevant Technical Developments from Industrial Inkjet & Konica Minolta

GROWTH OF AQUEOUS INKJET IN HIGH SPEED DIGITAL PRINTING

Bryan Palphreyman, Inkjet Consultant, Sensient Colors UK Ltd, Norfolk, UK

- Transpromo: Is this the "Killer App" Inkjet has been Waiting For?
- Why Aqueous? UV vs. Aqueous Performance & Benefit Analysis
- Increasing Use of Primer Technologies: The Fifth Color?
- Challenges to Inks & Colorants in High Speed Inkjet Presses
- Sensient's Development of S.M.A.R.T. Technology

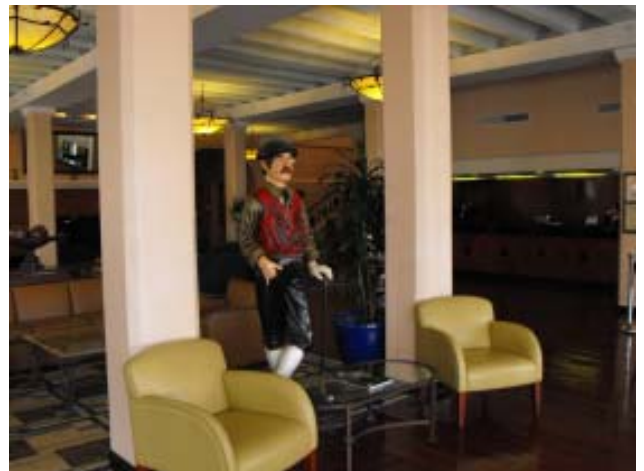
INKJET COLOR PRICING: PUTTING A VALUE ON COLOR

Guy Broadhurst, Vice President, New Technologies and Client Development, Oce North America, Boca Raton, Florida

- Are You Really Ready for Inkjet Color Business?
- Great Opportunities – But Challenge of Accurately Calculating True Costs
- Ink Usage Varies Greatly: Number of Images, Actual Colors & Color Density
- Ability to Calculate Total Ink Coverage & Provide Accurate Quotes
- Maximizes Revenues, Provides Better Service & Improves ROI

1:30 p.m.

Adjournment





Ink Jet Academy: Theory of Ink Jet Technology

Crowne Plaza San Marcos Resort
Chandler (Phoenix), Arizona

February 1-2, 2010

Ink jet printing is the fastest growing imaging technology for office and graphics applications and particularly for digital fabrication, 3D modeling, printable electronics and many other industrial applications. These many new applications are opening up extensive opportunities for materials suppliers, media developers, consumables manufacturers, systems suppliers and others. But entering the ink jet market or just branching out into new parts of it can present a considerable technical challenge with many barriers to commercial success. Understanding the fundamentals is a prerequisite to any development. **The Ink Jet Academy: Theory of Ink Jet Technology** offers a course covering the basic theory of all the diverse types of ink jet technology in use today. Learn how the printheads work, what materials are used in their fabrication and the theory of operation. Learn about inks and media, how they are formulated and the supply and support systems.

Led by Dr. Alan Hudd, Xenxia Technology and Mike Willis, Pivotal Resources, **The Ink Jet Academy: Theory of Ink Jet Technology** provides a program and convenient format to get an expert start in the ink jet field, to get an update or to open up new ink jet fields.

Monday, February 1, 2010

12:00 Noon 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 APPLICATIONS

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

INK TECHNOLOGY

- Understanding the Ink Jet Ink Printing Process
- Designing an Ink Jet Ink
 - Piezo Drop on Demand
 - Continuous Ink Jet
 - Thermal Ink Jet
- 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

DOD PRINthead DESIGNS & VENDORS

- Thermal Ink Jet
- Piezo Ink Jet
 - Piston Mode Designs
 - Roof Mode Actuators
 - Stacked Piezo Technology
 - Shear Mode Designs
 - Silicon Printheads

5:30 p.m. Networking Reception in Display Area

Tuesday, February 2, 2010

8:00 a.m. Breakfast

8:30 a.m. Session 2

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
- Greyscale Techniques
- Drive Waveforms

PRINT & IMAGE QUALITY

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

12:00 Noon Lunch

1:00 p.m. Session 3

SYSTEM DESIGN ISSUES

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

FUTURE DEVELOPMENTS

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

5:00 p.m. Adjournment

Ink Jet Academy Leaders

Dr. Alan L. Hudd, Chief Executive Officer, Xenxia Technology Limited, Letchworth, Hertfordshire, UK

In 1996, Dr. Hudd founded Xenxia Technology; the world's first independent contract inkjet technology house dedicated to the industrial and office inkjet industries. Since then, Dr. Hudd has grown Xenxia into a leading player in the rapidly emerging market for industrial inkjet technologies. Under Dr. Hudd, Xenxia 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 Xenxia, 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.

Xenxia is the world's leading chemistry driven industrial inkjet integrator. Xenxia provides a complete contract R&D service to support the development of new applications. Xenxia supplies printers and inks for production line solutions to OEM's and end-users across a range of industrial applications. Xenxia is part of the Royal Tencate Group.

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

Mr. Willis founded Pivotal Resources, a consultancy in the digital printing industry, in 1995. He has experience in a wide range of technologies and markets including drop-on-demand and continuous ink jet printing, electro-photographic technology, greyscale and colour reproduction methods and light sensitive materials.

Prior to founding Pivotal Resources, Mr. Willis was Director of Electronic Printing at Meta Generics. He was a founder member of Xaar - a spin-off company from Cambridge Consultants where Mr. Willis spent ten years working in a number of roles, culminating as Group Leader of Non-Impact Printing. Before that, he spent six years at Gestetner developing photocopiers.

Mr. Willis graduated from the Polytechnic of Central London with an honours degree in Photographic Sciences.

REGISTRATION INFORMATION: IMI's Digital Printing World 2010 Conferences



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

The registration fee includes attendance at all sessions, all scheduled program functions and the program reference binder/CD. 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, but will receive a copy of the conference binder/CD.

To register, submit the registration form with payment to Susan Meldrum Vandrey, 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 visiting our web site www.imiconf.com

REGISTRATION FORM

- 13th Annual Toner Printing Conference**
February 1-3, 2010
- 21st Annual Thermal Printing Conference**
February 1-3, 2010
- Ink Jet Academy: Theory of Ink Jet Technology**
February 1-2, 2010
- 19th Annual Ink Jet Printing Conference**
February 3-5, 2010

I wish to reserve a Display Space Suppliers' Forum slot

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Crowne Plaza San Marcos Resort

IMI's **Digital Printing World 2010 Conferences** are being held at the Crowne Plaza San Marcos Resort (www.sanmarcosresort.com), an impressive property that's listed on the National Register of Historic Places in Chandler, Arizona. Hotel reservations are the responsibility of each meeting registrant. **Early booking is advised** as the special meeting rate of \$139 (includes resort service fee) for single or double occupancy is guaranteed **only until January 11, 2010**. After that date, the group meeting rate will be on a space available basis.

To make hotel reservations online, go to the Crowne Plaza San Marcos Resort's IMI Digital Printing World 2010 reservations web site: https://resweb.passkey.com/Resweb.do?mode=welcome_ei_new&eventID=1506910 and complete required information under "Search Available Rooms," click on "Search Rooms" and this will take you to screen where you may select the desired room and proceed through reservation procedure. You may also **phone 888-233-9527** and identify yourself as part of "Information Management Institute's Digital Printing World 2010 Conference" group.

The Crowne Plaza San Marcos Resort is located on 123 landscaped acres in charming downtown Chandler (www.downtownchandler.org) 20 minutes southeast of Phoenix Sky Harbor International Airport. The Crowne Plaza San Marcos Resort was the first golf resort in Arizona (1913) and offers restaurants/shopping just steps from the resort. The 295 guestroom feature private patios or balconies overlooking luxuriously landscaped courtyards and offer complimentary in-room internet plus Crowne Plaza's Sleep Advantage program.

Special conference golf rates are \$79.00 including green fees and cart for Friday-Sunday and \$69.00 including green fees and cart for Monday - Thursday

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Special Registration Fee

Because IMI's **13th Annual Toner Printing Conference** and **21st Annual Thermal Printing Conference** are being held concurrently, both conferences are included in one fee. Thus, you can register for both of these conferences and attend sessions of your choice in each conference (you will receive both conference binders and CD's).

Also, this means that you can attend these conferences plus IMI's **19th Annual Ink Jet Printing Conference** for only two registrations fees - all three conferences and conference materials for a total of \$2090 for first registrant from a company and only \$1990 for a second registrant from same company to attend all three conferences. Email imi@imiconf.com or call +1-207-235-2225 with questions and for details.

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