

# RFID Smart Labels USA 2006

The Global Resource for RFID and Beyond

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"Attendance from just about every industry... A great conference!"

March 28-29, 2006 Westin Copley Hotel, Boston, MA, USA

Where the world of Smart Labels meets and does business

## RFID for the USER, LABELER, PACKAGER, PRINTER & CONVERTER

### LEARN HOW TO:

- Make the business case: opportunities in diverse markets
- Deploy RFID: challenges and successes, a step-by-step approach
- Meet demand: how to manufacture RFID
- Make money from RFID: adding value

### FIND BEST COVERAGE OF:

- World-first announcements from users and technology companies
- User experiences and needs
- The world of RFID: progress from China, Asia, Middle East, Europe and Americas
- Cutting edge RFID and smart label technologies including Active RFID, Chipless RFID, Printed Electronics

### DO BUSINESS:

- The world's leading vendors, users and integrators
- Explore high value, high volume niche markets

Register NOW and receive FREE access to over 1,700 RFID case studies including company profiles and presentations from the IDTechEx RFID Knowledgebase!

### EXCLUSIVE REPORT LAUNCH

"RFID in Action 2006" free for all delegates PLUS Rexam's Packaging Innovation 2006 report

### HEAR FROM WORLD LEADERS:



### ASSOCIATION SPONSORS:



### IDTECHEX IS A MEMBER OF:



Register at [www.smartlabelsUSA.com](http://www.smartlabelsUSA.com)

# | Main Conference Agenda | Deploying RFID & New Opportunities

Actual users by industry | Massive new 'niche' markets | Case studies | Challenges and opportunities | Making money from RFID

**Tuesday March 28<sup>th</sup> 08:30–17:30**

**All Delegates**

## MAJOR USERS AND NEW OPPORTUNITIES

**IDTechEx** "RFID 2006–2016"  
**CHAIR: IDTechEx, UK** *Dr Peter Harrop, Chairman*  
• Forecasts, new opportunities and global trends

**US-VISIT** "Securing borders with RFID: The World's largest security program"  
**US Department of Homeland Security US-VISIT, USA**  
*Michael Westray, IT Manager*  
• The Department of Homeland Security has established US-VISIT: a \$10Bn program to secure the US borders. It is the largest non military and non aerospace project funded by the Government and RFID is playing a big role

**GE** "RFID Systems Testing and Implementation at GE"  
**General Electric, USA** *Lynn DeRose, GE Research*  
• GE's approach to testing RFID systems in manufacturing, assembly, production and warehouse facilities  
• Pilot testing results and lessons learned  
• RFID needs for implementation and acceptance within a large, globally diverse company

**Chevron** "The Opportunity for RFID in Energy Companies"  
**Chevron, USA** *David Shipley*  
• RFID in Chevron: our experience so far and what we want

**US Department of Defense** "The US Department of Defense and RFID: Progress so far and what's next"  
**The US Department of Defense Logistics Agency, USA**  
*Nicholas Tsougas, Senior Logistics Analyst*  
• Why RFID for DOD?  
• Defense Logistics Agency passive RFID implementation  
• Data Architecture and RFID Security issues

Exhibition and networking break

## RETAIL / CONSUMER GOODS

**WORLD FIRST** "The World's first supermarket deploying full item level RFID tagging"  
**Emirates Technical Innovation Centre, United Arab Emirates**  
*Amet Kianin, Director*  
• World first at the United Arab Emirates  
• Why we are doing this and our roadmap – our unique approach  
• Order of over 1 million tags for first trial

**P&G** "Procter & Gamble/Gillette and RFID: Our RFID Packaging challenges and our progress so far"  
**Procter & Gamble, USA** *Jamshed Dubash, Director of Technology EPC*  
• Our experience of combining RFID with our consumer packaged goods  
• What we have learnt

**Tyson** "RFID – Powered by Tyson"  
**Tyson Foods, USA** *Robert Post Control System Engineer*  
• Identify unique areas in perishable foods  
• Unique challenges to payback

**Beaver Street Fisheries** "RFID and Mandates – Deriving Paybacks for the Brands"  
**Beaver Street Fisheries, USA** *Howard Stockdale, CIO*  
• Why we opted to meet Wal-Mart RFID mandates ahead of schedule  
• How we are gaining benefit

Panel discussion

Lunch, exhibition and networking

## Track one

### HEALTHCARE & PHARMACEUTICAL

**Tagsys, France** "Item level RFID at Pfizer – Combating Counterfeits and Black Marketing with RFID"  
*Ken Reich, Director*  
• Tagging Viagra – rolling out item level RFID  
• The RFID end-to-end system and infrastructure  
• Challenges and Anticipated paybacks in the Pharmaceutical industry

**Purdue Pharma, USA** "Protecting the Pharmaceutical Supply Chain: Is RFID the Silver Bullet?"  
*Aaron Graham, Vice President & Chief Security Officer*  
• Counterfeit drugs – the problem  
• How we are using RFID at item level to address this serious threat

**Massachusetts General Hospital, USA** "RFID Smart Labels and Patient Safety: improving the safety of blood transfusion"  
*Sunny Dzik, Co-Director, Blood Transfusion Service*  
• The problem of mis-transfusion (wrong blood transfusion)  
• Using RFID to improve patient safety  
• RFID opportunities at one of the US's largest hospitals

## Track two

### POSTAL, COURIER AND LOGISTICS

**Hutchison Port Holdings, Hong Kong** "Deploying RFID for Real Time Location Visibility Across the Globe"  
*Hutchison Port Holdings, Hong Kong*  
• Our global port network: why we needed real time visibility  
• The integration and system challenges  
• Our success and global adoption

**TNT Logistics, USA** "RFID Drives Big Benefits For TNT Logistics and Ford Motor Co."  
*Terry McIntyre, Manager, Solution Design Technology Services*  
**Wherenet, USA** *Gary Latham, Director of Industry Marketing*  
• Best practices for leveraging RFID in closed loop systems  
• How to use RFID to increase velocity and throughput in very dynamic manufacturing and logistics environments  
• How active RFID can automate manual-intensive business processes to improve operational efficiency

**DHL, USA (Owned by Deutsche Post, Germany)** "RFID at DHL: Our extensive work so far and next steps"  
*Bob Berg, Sr Business Systems Manager, RFID Manager, America*

Exhibition and networking break



**The Largest Smart Labels Conference in the World – RFID Smart Labels USA 2006**

Actual users by industry | Massive new 'niche' markets | Case studies | Challenges and opportunities | Making money from RFID



## "Pharmaceutical Pedigree Law"

**Aventura Hospital, USA** *Dr In K Mun, Director, Hospital Research, HRI, MIT Director, Bio-Medical Research, Aventura Hospital & Medical Center Adjunct Associate Professor, Neurosurgery, UMDNJ*

- The Florida pedigree law will be effective from July 1, 2006. At this time, there are still many issues to be resolved before a complete rules and regulations can be written. This presentation will discuss some of the difficulties facing in writing a pedigree law which can improve patient safety.

Exhibition and networking break

## TRANSPORT



## "RFID at British Airways and IATA's RFID progress"

**British Airways, UK** *Karl Brooks, Innovations Consultant*

- IATA's RFID Baggage Tracking Recommended Practice (RP1740c) and UHF
- Future uses of RFID at British Airways



## "E-Passports: Legislation, standards and the massive potential"

**Arjo Wiggins, France** *Pascal Marlin, R&D Manager*

- Using RFID to fight against gray markets and counterfeiting
- The opportunity for RFID in passports and Visas – what's happening in 2006 and beyond



## "Delivering Solutions for Transportation"

**TracStar Solutions,** *John C. Shoemaker, CEO*

- Success to date in the aviation market
- How to justify RFID implementation
- Creating new business models for mutual success

## RFID IN PACKAGING



## "Packaging Innovation and RFID"

**Rexam, UK** *Felix Helander, Director, Business Intelligence*

- The need for packaging innovation
- The size of the packaging market and current consumer trends
- The role of RFID to increase sales and provide brand enhancement

Rexam will give all delegates a free copy of their annual "Packaging Innovations" report, with detailed forecasts and trends of the consumer packaging market.



## "Resolving the Technical Challenges for Rigid Packaging"

**Crown Holdings, UK** *Michael Cochran, Materials Development, Crown Technology*

- Introduction to Crown Holdings
- The Future of RFID and Consumer Packaging
- RFID at single item



**Smurfit Stone, USA** *Joe LeBlanc, R&D*

Exhibition and networking

Meet the Experts Gala Dinner at the "Top of The Hub" (optional)

## ECOMMERCE AND NEW CONSUMER PROPOSITIONS



## "New Consumer Services with RFID"

**LG Innotek, Korea** *JS Park, CTO and VP*

- RFID and cellphones: the new markets we are creating
- Why it is happening in Asia first



## "Electrolux and RFID"

**Electrolux, Italy** *Mr Claudio Cenedese, Manager Electronic Primary*

- Application of RFID in Electrolux factories
- RFID compliant appliance: how appliances could change when smartlabels will boom on the market



## "RFID for contactless payments – the global opportunity"

**IDTechEx, UK**



## "Does RFID Reduce Out of Stocks?"

**University of Arkansas, USA** *Dr Bill Hardgrave, Executive Director, IT Research*

- An analysis of how RFID can be used to reduce out of stocks
- The findings from a research project designed to answer the question: "does RFID reduce out of stocks?"
- A brief examination of other value-producing uses of RFID in the supply chain

## RFID IN CHINA

## "RFID Standards in China"

**China National RFID Standards Workgroup, China,**

*Information Technology Research Centre, China Electronic Standardization Institute*



## "RFID Technology in China"

**Sparkice Inc, China,** *Edward Zeng, CEO, Sparkice Inc; Secretary-General, RFID China Alliance*

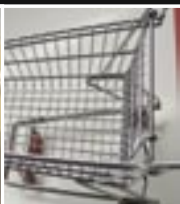


## "RFID progress in China – the biggest orders and other RFID Case studies"

**IDTechEx**

Exhibition and networking

Meet the Experts Gala Dinner at the "Top of The Hub" (optional)





# 0 | New Technologies | How to Make RFID Smart Labels

Chip & chipless RFID | Active RFID | Printed electronics | System integration | Sensor RFID  
Manufacturing RFID | Materials | Online and offline integration | Verification

**Wednesday March 29<sup>th</sup> 08:30–17:30**

Track one:

RFID technology & systems

**IDTechEx** "From chipless to active RFID"  
**IDTechEx, UK** Raghu Das, CEO

### CHIP RFID DEVELOPMENTS

**ODIN Technologies, USA** Patrick J. Sweeney II, President/CEO

- "How to achieve hassle free RFID project success: a first hand perspective"
- From planning for a deployment through design, installation, testing and support, Mr. Sweeney will share the best practices and pitfalls that can make or break your RFID Project

**EM Microelectronic, France** Mr Thierry Roz, RFID Business & Product Dev Manager

- Where are the limits of economy of scale?
- Wafer cost, function set, feature size and assembly process impact on the chip price. How do these aspects influence final label cost and which are the alternatives you should consider?
- What are the costs of standards and what are the alternatives?

**Fujitsu, Japan** Midori Taniyama, RFID Systems Department, Ubiquitous Systems Group

- RFID case studies
- Fujitsu and RFID: total integrated RFID solutions
- New memory technology for high speed, long range read and write

**Intermec Technologies, USA**

"Technology Prospects for Item-Level Tagging"

**Tagsense, USA** Dr. Richard Fletcher, CEO

- Survey of emerging technologies and products for item-level tagging
- Plummeting costs of UHF RFID readers and emergence of polymer ICs now bring item-level within reach of practical deployments
- Cost and performance trade-offs of chipless, chip, and ink technologies

Exhibition and networking break

### LONGER RANGE PASSIVE RFID

"Many meters range from HF tags"

**DAG-System, France** Eric Varlet

- Long range HF RFID solutions
- Unconstrained RFID

"Longer range, higher performance passive tags using new antenna options"

**Fractal Antenna Systems, Inc. USA** Nathan Cohen, Founder and CTO

- Where will antenna design take us?
- Read range on tags have reached a temporary plateau, which will be dramatically exceeded
- Wideband tags will become the name of the game for multiple chip choices and labeling platforms
- Label tags on metal are approaching reality
- Optimization tools and exotic antenna options such as Fractal antennas

### CHIPLESS RFID

"Next generation of RF Tag based Track&Trace technologies – InkSure's approach"

**WORLD FIRST InkSure, Israel** Don Taylor, VP Global Marketing

- Unveiling of a new technology

"Printed Electronics: Low Cost Smart Label"

**Opportunities"**

**Motorola, USA** Ms Jie Zhang, Principal Staff Engineer

- ICT overview
- Printed electronics technology (PET)
- Functional inks for PET
- Smart label: a product opportunity for PET

"Fully Printed RFID for high volume application"

**PolyIC, Germany** Wolfgang Clemens, Head of Applications

- Status of organic electronics for RFID
- Low cost production by printing
- Roadmap for printed RFID
- Smart objects based on printed electronics

Lunch, exhibition and networking

### ACTIVE RFID AND RFID INTEGRATION

"RFID Temperature Monitoring: Fitting the Pieces Together"

**Cryovac / Sealed Air Corporation, USA** Bill Roberts, Research Fellow, Packaging Research

"Active RFID Using Standard Wi-Fi: The Network Convergence"

**AeroScout, USA** Gabi Danieli, VP of Marketing

"Realizing the DOD Vision"

**PRISYM Medica** Michael Guthausen, Strategic Accounts Manager

- Fully automating visibility and asset management to optimize the supply chain in an integrated end-to-end enterprise

"The state of the RFID Industry"

**Robert W. Baird & Co., USA** Reik Read

- Update on RFID progress in the market
- Overview of investment options
- Outlook for RFID in 2006/07

Exhibition and networking break

Track two: How to manufacture smart labels

**IDTechEx** "Options and challenges for high-speed production of RFID smart labels"  
**IDTechEx, USA** Dan Lawrence, VP Business Development

### RFID LABELS AND CONVERTING

**Avery Dennison RFID** George Reynolds, VP Sales and Marketing

"How we scaled up and delivered 25 million RFID tickets in 2005 for one order"

**Toppan Printing, Japan** Mr. Hadi Ogawa RFID IC Business Division Supervisor

- The project and goals: a step by step analysis of what was done
- Achieving high yields in high volume production

"Manufacturing RFID: The value chain and needs for improvement"

**UPM Rafalac, RFID Business Area** Jan Svoboda, Business Development Director USA

- Improving yields versus price
- Dealing with electrostatic charges
- Turning up the production speed – What happens to the tag performance?

"The real cost of RFID inlays for converters is in the yields"

**Omron, Japan** Bill Arnold, Chief Strategist

- Cost of inlays vs machine utilization costs
- An overview of inlay manufacturing processes

Exhibition and networking break

### MATERIALS AND PROCESSES

"Processing RFID Antennas; Ink to Chip"

**Dow Corning, USA**

- Exploring Printing Methods for conductive ink
- Chip/Strap Attach Solutions
- Evaluation & Comparison of various RFID assembly methods

"Low Temperature Snap Cure Adhesives for Flip-Chip Bonding: Process Improvement at Maximum Velocity"

**Delo, USA** Stefan Mieslingers, Project Manager Smart Label

- Basics about flip-chip contacting
- Processing, curing information and reliability results

"Low Cost RFID – a reality today!"

**Parelec, USA** Geva Barash, CEO

- How can we achieve low cost RFID today?
- Ways to grow your business with printed RFID

"Development of Isotropic conductive adhesive for metallic substrates used in RFID tag assembly"

**Emerson & Cuming, USA** Jay Shah, Product Development

"RFID Smart Labels from Reel to Reel"

**Bielomatik Jagenberg Inc, Germany** Max Golter, Vice President Sales

- Cost effective, high volume, and reliable manufacturing of smart labels
- Comparing current and future smart label designs, what's right?
- Avoiding equipment obsolescence

Lunch, exhibition and networking

### SMART LABELS AND SENSORS

"Using "Smart" Holograms as Diagnostic Sensors"

**Smart Holograms, UK** Satyamorthy Kabilan, Principal Scientist

- "Smart" holograms are low-cost, robust, format flexible sensors that can be tailored to detect a wide range of stimuli
- Examples of various sensors will be provided including moisture, bacterial and pH detectors

"Degradation Sensors: Making Smart Labels Smarter"

**Polymer Aging Concepts Inc, USA** Kenneth Watkins, CEO

- Report on cable condition monitoring (CCM) research conducted for Department of Energy
- Commercial applications for degradable products

"RF-based sensor monitors the cold chain"

**Bloett, Denmark** Bengt Sahlberg, CEO

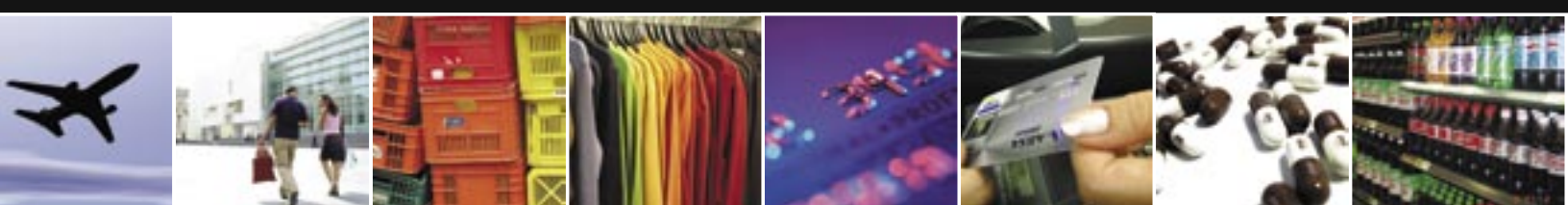
- Overview of the Bloett technology
- Customer cases
- Integration with RFID

"Integrating RFID technology to track environmental sensors"

**Maxim Dallas Semiconductor, USA** Guru Raj, Manager, RFID

- IC based temp sensor technology description
- Market & Technology enablers for RFID based time & temperature datalogger
- Performance limitations in extending EPC Gen2 to Semi-passive tags

Exhibition and networking break



Register at [www.smartlabelsUSA.com](http://www.smartlabelsUSA.com)

IDTECHEX is at the forefront of the RFID industry. TRUST in independent information and analysis from a global leader.

**FIND:**

- The World of RFID; China, Japan, Korea, Middle East, Europe, Americas
- Real Life Case Studies from YOUR INDUSTRY
- Making the Business Case
- Users Needs and Experiences
- Assessment of the Biggest Markets
- Routes to Manufacture, Integrate and Implement RFID & Smart Labels
- Global Analysis from Experts
- Emerging Technologies such as Printed Electronics

**LEARN, TRY, BUY:**

- Smart, Active, Interactive and Intelligent Labels
- Active, Passive & Chipless RFID
- HF, UHF and Beyond
- Readers and System Integration
- Inks, Substrates and Adhesives
- Printing, Production and Materials
- Printed Electronics

**UNIQUE BENEFITS:**

- Our consulting capabilities allow us to offer you unique benefits from attending. Each delegate will receive the following for free, worth more than \$1500:
- Three months access to over 1,700 RFID Case Studies from the IDTechEx RFID Knowledgebase Learn what is being done by territory, technology and company in our massive searchable database of RFID Case Studies, worth \$700
  - Six months access to the independent IDTechEx journal Smart Labels Analyst We don't publish news, just comment, analysis and new global progress. Stay updated with the topic for the months to come, worth \$250
  - RFID samples for all delegates to keep and view LIVE demonstrations
  - The IDTechEx RFID Encyclopedia 100 pages with over 70 figures – read this before the event to get up to speed with the topic, worth \$500

**PLUS:**

"Packaging Innovations" report, sponsored by Rexam, giving you the 2006 global update to packaging markets, consumer trends and RFID in packaging

**EXCLUSIVE LAUNCH AT EVENT:**

"RFID in Action 2006" Written by GS1 UK and IDTechEx, this covers progress from global RFID case studies.

No other event offers such a complete resource for your RFID needs.

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**Your Guarantee:**

We think this conference covers all the issues and topics you need to know about with RFID. If you leave with questions you still need help on, IDTechEx consultants will provide you with up to one hour of FREE consulting time, by telephone, to lead you through the answers. This needs to be used by April 30th 2006. Trust IDTechEx.



**Register at [www.smartlabelsUSA.com](http://www.smartlabelsUSA.com)**

**Find answers to your key questions – IDTechEx tie it all together for you.**

- What are the real issues when deploying RFID – what works and what doesn't?*
- What are the technical and business issues users are experiencing?*
- How do I make money from RFID now?*
- How can I add value to RFID and who needs it?*
- How do I get involved in making RFID Smart Labels?*
- What are the full range of technologies available and their suitable markets and what is coming next?*
- How do I judge investing in such a fast moving market?*
- What should I do that's unique?*

**IDTechEx** provides independent consultancy on RFID and printed electronics and we have devised a conference agenda highlighting the latest issues and opportunities answering these questions. Our speakers from 14 countries explore needs from diverse market verticals highlighting new opportunities. Many are speaking for the first time. Learn all about:

- **Making money from RFID by avoiding the crowd** – opportunities for high margin, high volume RFID labels in 'niche' markets
- **Users' RFID needs, implementation experiences and next steps** – analyzed by users themselves by industry vertical
- **New RFID technologies** – from fully printed RFID to active RFID with sensor technology and new developments such as fractal antennas
- **How to Make RFID Smart Labels** – everything that converters to material suppliers need to know to get involved – the risks, challenges and short and long term opportunities

We forecast the total RFID market to grow from \$2.71Bn in 2006 with deliveries of 1.3 billion tags to \$26.23Bn in 2016 with deliveries of over 500 billion tags. The respective markets and technologies will be very different. Make sure you know why, what is coming and what you should be doing now.

Experts will be on hand at the fifth annual RFID Smart Labels USA conference to guide you through the issues.



Peter Harrop Raghu Das Dan Lawrence

**Your Guarantee:**

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An eye opening wide range view of the RFID world

*Boots Healthcare International*

Well attended by the key participants in RFID

*Marks & Spencer PLC Ohio State University*

Exciting real world RFID applications!

*Smurfit-Stone Container Corp Polaroid Corp*

Attendance from just about every industry ... A great conference!

*3M Company*

Excellent overview of up-to-date status on RFID

*Samsung*

Remarkable, gets better each year

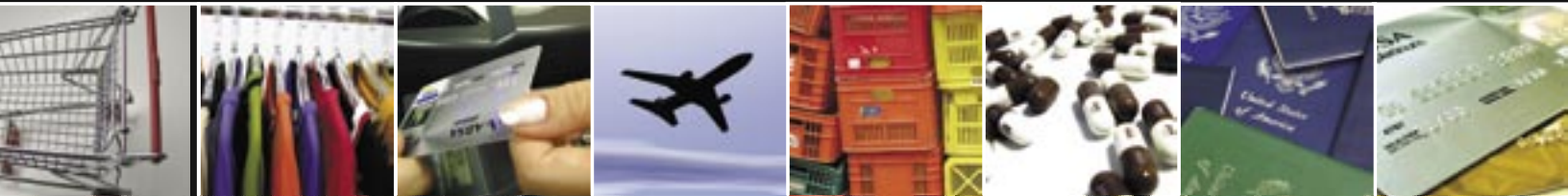
*Schick & Wilkinson Sword Infocomm Development Authority of Singapore*

Best event I've found to both learn about the latest RFID technology and network with industry players

*Pitney Bowes*

**Meet the Experts Gala Dinner**

Network with delegates in an exceptional venue at our optional 'Meet the Experts' gala dinner on March 28 at Boston's famous landmark restaurant "The Top of the Hub". The evening boasts excellent networking, great food and fantastic views of one of the world's great centers of RFID.



**Register at [www.smartlabelsUSA.com](http://www.smartlabelsUSA.com)**



# Masterclasses | Monday March 27<sup>th</sup> & Thursday March 30<sup>th</sup>

The optional Masterclasses are effectively interactive consultancy sessions. At each Masterclass you will have the chance to handle many samples, see demonstrations, and take away printed copies of presentations. They will teach you the latest information and will ensure you get the most from the conference and leave understanding the issues with answers to your questions.

- Handle over 150 RFID samples from around the world
- Tell experts about your problems
- Take away your own samples
- Get answers to your questions

## RFID (Masterclass 1)

Monday March 27: 08:30–12:30

A complete introduction to RFID systems, markets and trends

- Chip and chipless tag technology evaluations and their applications
- Active RFID and combining RFID with sensors
- Examples of RFID being used, how many have been sold and into which markets
- Markets driving volume use of RFID to 2016
- New applications and advice on entry to market
- Comparison of RFID frequencies
- The RFID value chain, major players and opportunities
- Failures and successes
- RFID standards
- Lessons from over 1,800 RFID case studies
- RFID forecasts and trends 2006–2016

Lunch for all masterclass delegates 12:30–13:30

## How to Manufacture RFID (Masterclass 2)

Monday March 27: 13:30–17:30

Aimed at converters, packagers, printers, label suppliers, specifiers, buyers and brand owners, this masterclass will educate you of the full value chain of manufacturing RFID smart labels. Topics covered include evaluation of manufacturing methods, chip attachment processes, antenna technologies, overprinting and insertion, specifying RFID labels, managing data and best practice.

- Understanding the tag production value chain
- How things are made and what they cost
- Evaluation of the choices for manufacturing complete RFID labels, tickets and cards
- Manufacturing RFID tag antennas: technologies, performance and cost
- Substrates, inks and adhesives: suppliers, costs and performance
- Chip attach options
- Analysis of routes to high volume manufacture
- Applying RFID to products: required throughput, testing and finish
- Major players, emerging players and unsatisfied needs i.e. opportunities

Main Conference and Expo Day One: [March 28](#)

Main Conference and Expo Day Two: [March 29](#)

## How to make money out of RFID (Masterclass 3)

Thursday March 30: 08:30–12:30

This masterclass explores the "low hanging fruit", undersupplied markets and examines what is needed. Don't follow the crowd, learn how you can make money from RFID now. We explore 'niche' applications which ultimately represent billion dollar, billion tag markets. We look at how you can add genuine value to your products and who will pay for them and we assess how you judge investing in RFID. The session covers:

- Assessment of large prosperous niche markets – such as books, drugs, tires, people, asset management, healthcare, clothing, baggage, ticketing and much more
- Assessments of technology needs by market type, uniques they seek and areas of undersupply and oversupply
- Who is making money out of RFID and who will do so
- Who will be making money in the future and when
- Timing your investment with RFID – what do you need to be doing now, what future technologies to expect and when
- Your role in the value chain – horizontal supplier or vertical integration? Where is the money?
- Analysis of RFID markets 2006–2016, what is needed – your opportunities

Lunch for all masterclass delegates 12:30–13:30

## Printed Electronics (Masterclass 4)

Thursday March 30: 13:30–17:30

Aimed for those new to the topic or who need to understand the big picture to assess the challenges and opportunities, this Masterclass will arm you with the latest knowledge of the applications and technology developments involving printed electronics. Learn of the toolkit of technologies that are available and emerging. The session will cover:

- Applications of printed electronics – now and near future
- Lessons to be learnt from early successes and failures
  - The value chain and 20 year market forecasts
- The need for printed electronics
  - Key markets that need printed electronics – reasons why and their technology requirements
  - Creating new markets versus competing with conventional electronics in existing ones
- Assessment of technologies, companies, strategies and progress so far, including
  - Thin film transistor circuits (organic, inorganic semiconductors, thin film silicon)
  - Displays (OLEDs, electrophoretic, electroluminescent, electrochromic and others)
  - Sensors, batteries, actuators and inks
- A discussion of printing techniques, their relevancy and challenges
- Challenges and the roadmap to the full printed electronics toolkit

All Masterclass delegates receive an additional six months access to the IDTechEx Smart Labels Analyst journal, keeping you updated with the topic for the months to come!



The Largest Smart Labels Conference in the World – RFID Smart Labels USA 2006

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**Post** IDTechEx Ltd, Far Field House, Albert Road, Stow-cum-Quy, Cambridge CB5 9AR, UK

Description	Normal Price
2 day conference and exhibition, electronic proceedings	<input type="checkbox"/> \$1399
Audio and electronic copies of presentations	<input type="checkbox"/> \$299
Meet the experts gala dinner	<input type="checkbox"/> \$89
Masterclass 1: In-depth Introduction to RFID	<input type="checkbox"/> \$799
Masterclass 2: How to Manufacture RFID Smart Labels	<input type="checkbox"/> \$799
Masterclass 3: How to make money out of RFID	<input type="checkbox"/> \$799
Masterclass 4: Printed Electronics	<input type="checkbox"/> \$799
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2 day conference, Meet the Experts gala dinner, audio and electronic copies of proceedings	<input type="checkbox"/> \$1699
2 day conference, Meet the Experts gala dinner, audio and electronic copies of the proceedings plus <b>TWO</b> masterclasses of your choice Please tick the Masterclasses you wish to attend <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4	<input type="checkbox"/> \$2999
2 day conference, Meet the Experts gala dinner, audio and electronic copies of the proceedings plus all <b>FOUR</b> masterclasses	<input type="checkbox"/> \$3999
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The IDTechEx RFID Forecasts, Players & Opportunities 2006-2016 30% OFF WITH CONFERENCE, normally \$1800.	<input type="checkbox"/> \$1260
ODIN Technologies Generation 2.0 EPC Tag Benchmark report - half price with conference! Normally \$1500.	<input type="checkbox"/> \$750
I cannot attend, please send give me access to the conference proceedings and audio of the presentations	<input type="checkbox"/> \$999
<b>Total</b>	

**PAYMENT METHOD**

Please Invoice Me

Direct bank transfer free of all charges to: HSBC, International Branch, PO Box 181, 27-32 Poultry Lane, London EC2P 2BX, UK.  
Sort code: 40-05-15; Account number: 58860628 IBAN: GB82 MIDL 4005 1558 8606 28; Bank BIC code: MIDLGB22

VISA     MasterCard     AMEX

Card Number

Name of Card Holder

Expiry Date

3 or 4 digit security number

Address of Card Holder

Post/Zip Code

Signature of Card Holder

Date

**CONTACT DETAILS**

Name

Position

Company Name

Address

Post/Zip Code

Country

Tel No

Fax No

email

Type of Business

- What is your job title? (tick one only)**
    - Chairman/CEO/President/Owner
    - Managing Director
    - Director/Vice President
    - Executive Product Development Manager
    - Brand Manager/Product Manager
    - Consultant
    - Journalist
    - Other management
    - Other (please specify)
  - What is your primary job? (tick one only)**
    - Design/Research/Development
    - Manufacturing/Production
    - Technical/Engineering
    - IT/Computers/Software
    - Distribution/Supply chain
    - Purchasing/Buying
    - Sales/Marketing
    - Brand/Product security
    - Other (please specify)
  - What is your involvement in RFID Smart Labels (tick one only)**
    - Brand/Product owner
    - Packaging producer
    - Tag supplier
    - Label converter
    - Technology supplier
    - Reader supplier
    - Label substrates
    - Systems integrator
    - Consultancy
    - IT/Software/Systems provider
    - Other (please specify)
  - What is your involvement in purchasing decisions? (tick one only)**
    - Final decision maker
    - Major influence
    - Specify for purchase
    - Influence only
    - Other (please specify)
  - Which products are you interested in/responsible for purchasing or supplying? (tick one only)**
    - Security/Brand protection labels
    - Tag/Converting equipment
    - Readers
    - IT/Software
    - Inks, coating, foils
    - Digital printing equipment/Software
    - Label substrates
    - RFID/Smart labels
  - Which end user sectors are you involved in? (tick one only)**
    - HPC
    - Retail
    - Transportation (auto)
    - Military
    - Manufacturing
    - Asset tracking
    - Documents/Archiving
    - Brand/Products enhancements
    - Postal
    - Apparel
    - Label/Tag manufacturing
    - Materials
    - Other (please specify)
  - Which process in label tag manufacturing are you involved in? (tick one only)**
    - Supplier of materials
    - Label/Tag manufacturer
    - Press/Converting equipment
    - Application equipment
    - Finishing equipment
    - Systems suppliers
    - Other (please specify)
  - Are you interested in:**
    - Active RFID
    - Printed electronics
- Options**
- Please tick if you DO wish to be kept informed of future Smart Labels events
  - Please tick if you wish to receive more information about Smart Labels and Smart Packaging
  - Please tick if you wish to receive information from relevant 3rd party organizations
- Hotel information**
- This event is held at the Westin Copley Place hotel in Boston. Visit [www.smartlabelsusa.com](http://www.smartlabelsusa.com) to book your accommodation at our special hotel rate. There are many relevant companies in Boston. IDTechEx will be delighted to facilitate introductions.

RFID Smart Labels USA 2006 is the ideal event to establish and forge new relationships that are essential to the success of your business.

**2006 IDTechEx dates for your diary:**

**Printed Electronics World - Europe**, 19-21 April, Cambridge UK

**RFID Smart Labels Europe**, 19-20 September, London UK

**Active RFID Summit USA**, November, Atlanta USA

**Printed Electronics World**, 5-6 December, Phoenix, USA

**Latest IDTechEx research:**

RFID Forecasts Players & Opportunities 2006-2016

The RFID Knowledgebase

Organic Electronics Forecasts, Players & Opportunities 2006-2025

See [www.idtechex.com](http://www.idtechex.com) for full details

**Terms & Conditions:** Hotel and travel costs are not included in the price. Substitutions may be allowed at any time, but please let us know. Cancellations must be made in writing 28 days before the event with a 15% cancellation fee. Unfortunately after that date the full registration fee applies. IDTechEx Ltd reserves the right to alter the location or content of the event.