

INDIANA IMAPS NEWS

INDIANA IMAPS OFFICERS AND CHAIRPERSONS

President: Neal Thomas
313-506-5985

Vice-President: Larry Wallman
317-887-2564

Secretary: Terry Baum
513-573-6425

Treasurer: Matthew Walsh
812-854-8136

Program Chair: Ray Fairchild
765-451-1068

Advertising & Vendor's Day:
Larry Wallman 317-887-2564

Publicity Chair: Terry Baum
513-573-6425

Newsletter: Matthew Walsh
812-854-8136

Regional Director: Bill Kidder
763-568-2992

IMAPS Headquarters: Steve Greene
888-464-6277
ext 711

INDIANA SMTA OFFICERS

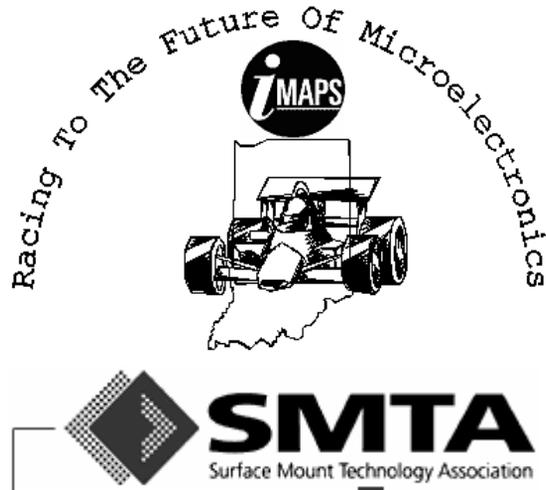
President: Eric Camden
765-457-8095

Vice President: Ben Wrightsman
317-331-1197

Secretary: Larry Robinson
317-753-3606

Treasurer: Tony D'Eramo
765-689-1000

Media Chair Nick Mates
317-501-4774



Indiana Chapters of:
IMAPS
Vendor's Day & Mini-Symposium
and
SMTA
Expo & Tech Forum

Monday, May 9, 2011

Clarion Waterfront Plaza Hotel and Conference Center
2930 Waterfront Parkway West Drive, Indianapolis, IN

Schedule of Events

12:00 – 6:30 pm

On-Site Registration

1:00 – 5:00 pm

Technical Presentations

5:00 – 6:30 pm

IMAPS & SMTA Sponsored
Vendor Displays

No advance registration is required. This event is free to all attendees. Come out and support the local Indiana IMAPS & SMTA chapters and the vendors who contribute much to these organizations. You do not need to be an IMAPS or SMTA member to attend. There will be refreshments, and door prizes at 6:00 pm for which you must be present to win. See you there !!

President's Message

In an event that is free to attendees, the Mini-Symposium that headlines our Vendor's Day activities on Monday, May 9 at 1:00 PM in Indianapolis featuring an excellent array of topics by knowledgeable presenters. We would like to have a full house in the auditorium for these presentations.

- Please insure that this May 9 event is on your calendar. Plan to attend and encourage your fellow IMAPS members at your company to attend.
- Please invite non-member colleagues to attend with you. Encourage them to evaluate the benefits of IMAPS membership and, hopefully, join our organization.
- Also, please invite business associates from other companies who may not be aware of the value that is received from participation in IMAPS. These people can be another source of new members for our chapter of IMAPS.

Following the presentations on May 9, we will have companies exhibiting a variety of products applicable to your projects at work. As has been our custom, there will be food served in the exhibit area; and door prizes presented at the end of the day. We really appreciate the work that Ray Fairchild and Larry Wallman have done organizing Vendor's Day for 2011. Also, we thank the vendors whose exhibit fees fund this event. Come, learn, network, and enjoy.

With your help, the Indiana Chapter of IMAPS can be the leading chapter for membership growth in 2011. Vendor's Day concludes our meeting activity for the season, but the officers and chairpersons will be planning for upcoming meetings which will rotate around the state as is our practice. If you have suggestions for meeting topics, or if you would like to run for an office or otherwise serve the organization, we want to hear from you. For more information on IMAPS, see <http://www.imaps.org>.

Thank you for being a member of IMAPS. I'm looking forward to seeing you on May 9.

Neal Thomas, President, Indiana Chapter IMAPS



Directions to Clarion Waterfront Plaza Hotel and Conference Center

From the North: US-31 S. to I-465 W. Merge onto I-74 E. via exit 16A. I-74 becomes Crawfordsville Rd. Turn right onto US-136 W. Turn right onto Waterfront Parkway West Drive

From the South: I-465 N. to Crawfordsville Rd. via Exit 16A toward US-136. Turn RIGHT onto Crawfordsville Rd. Turn right onto Waterfront Parkway West Drive. Pass through 1 roundabout. Turn slight left onto Waterfront Parkway West Drive.

Keynote Speaker

Mitch Roob, Secretary of Commerce for the State of Indiana and Chief Executive Officer of the Indiana Economic Development Corporation



The Indiana Economic Development Corporation (IEDC) is the State of Indiana's lead economic development agency. The IEDC was officially established in February 2005 to replace the former Department of Commerce. In order to respond quickly to the needs of businesses, the IEDC operates like a business.

Led by Indiana Secretary of Commerce and IEDC Chief Executive Officer E. Mitchell Roob, Jr., the IEDC is organized as a public private partnership governed by a 12-member board. The IEDC Board of Directors is chaired by Governor Mitch Daniels and reflects the geographic and economic diversity of Indiana. The IEDC focuses its efforts on growing and retaining businesses in Indiana and attracting new business to the State.



The IEDC is focused exclusively on economic development and has incorporated all state entities with economic development responsibilities into its organizational structure. With its new structure and improved toolkit resulting from a successful legislative effort undertaken by the Governor and the Indiana General Assembly, the IEDC leverages Indiana's central location, pro-business environment, low tax rate, and skilled workforce to attract and support new business investment, create new jobs, and keep Indiana competitive in the 21st Century economy.

E. Mitchell Roob, Jr. (Mitch) is the Secretary of Commerce for the State of Indiana and Chief Executive Officer of the Indiana Economic Development Corporation (IEDC). As Secretary of Commerce, Roob is a member of Governor Mitch Daniels' cabinet and leads the state's economic development efforts.

Prior to joining the IEDC in January 2009, Roob served for four years as the Secretary of Indiana's Family and Social Services Administration (FSSA). FSSA is the health and social services branch of state government, including Medicaid, Food Stamps, programs for senior citizens, and services for people with mental illness, addictions and disabilities.

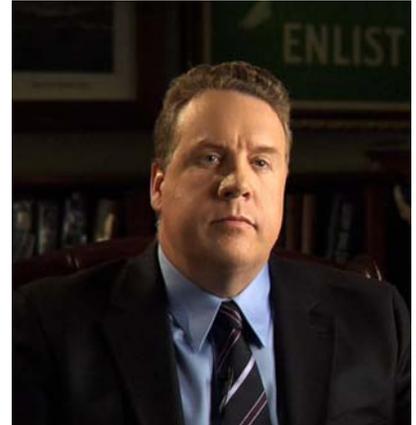
As secretary, he led a major transformation of FSSA including initiatives to install the first agency-wide accounting system and to reduce the long-standing waiting list for services to persons with disabilities and the elderly. Roob also was the principal architect of the Governor's innovative Healthy Indiana Plan to address the issues of high rates of smoking, low rates of childhood immunizations, and the growing number of uninsured Hoosiers.

Roob's prior experience includes serving as Director of the Indianapolis Department of Transportation, where he organized the city's "Building Better Neighborhoods" infrastructure program and worked with Mitch Daniels, then Chairperson of the Competition Initiative, to spearhead the promotion of public/private partnerships

Keynote Speaker

Tom Sharpe , Vice President of SMT Corporation

Our National Security is Dependent on us to Keep Up With Counterfeiters' Techniques



With the world market as their sales territory and a host country that turns a blind eye to the rights of Intellectual Property (IP) holders worldwide, the counterfeiting and resale of electronic components in Shantou & Shenzhen China is alive, well and flourishing. A first-hand narration of a photo-documented tour of this area provides compelling and clear evidence showing this threat is far worse than we imagine and here to stay. The recent refinements of the counterfeiter's craft demonstrate clearly that we are battling very well-informed and well-funded groups of criminal enterprise.

What is still worse is that a large amount counterfeit material is produced specifically for Defense and Aerospace Industry applications. The dire consequences this situation exposes to our war fighters, our national security and our allies cannot be over-stated.

The only reasonable response from quality component distributors to this continually evolving threat can be to constantly re-evaluate, revise and improve all aspects of inspection techniques, processes and equipment used for component testing and authentication.

Tom Sharpe is the Vice President of SMT Corporation, located in Sandy Hook Connecticut. Tom co-founded SMT with his wife Kirsten in 1995 and they have since built SMT into one of the industry's leading Independent Stocking Distributors of electronic components. In addition to being a long-time member of ERAI, Tom is the current Vice President of IDEA (Independent Distributors of Electronics Association) where he has served continuously on the Board of Directors since the year of it's formation in 2003.

Tom is a member of Aerospace Industry Association's Counterfeit Parts IPT, and a member of SAE International's G-19 committee that is currently developing the new AS6081 certification standard for Electronic Distributors. Tom is very active on the Defense & Aerospace Industry speaking tour and has become a leading voice from the Independent sector in the fight against counterfeit components in the electronics industry. Tom's presentations serve to educate all sectors of the electronics industry about the growing dangers of counterfeits in today's market, and best practices to detect and mitigate those dangers.

Comparison of Thermal Performance between IAMS and MCPCB Substrates

Tracey Smolinsky - Technical Service Engineer, Heraeus Materials Technology LLC

Metal-core printed circuit board (MCPCB) is a widely used substrate for electronic applications such as high power/high bright LED. This substrate provides the thermal management that is necessary to keep the LED operating at the correct temperature. Controlling the temperature increases the efficiency and lifetime of the LED.

Heraeus' Insulated aluminum materials system (IAMS) is a material set designed to be used in place of MCPCB in applications where thermal management is required. It is well suited for application in thermal management such as high power/high bright LED (> 1 W) thermal substrates, Concentrated Photovoltaic substrates (CPV), and high power electronics.

IAMS is a low temperature (<600 °C) firing thick film insulating system that can be printed and fired on a variety of aluminum substrates, including finned heat-sinks. The system includes a single component insulating paste, thick film silver conductor and thermal via paste, and a variety of cover coat options. The system can be soldered with Pb-free solders and is Au wire bondable. The materials are environmentally friendly, with no lead, cadmium or flammability issues.

This presentation will examine the specific thick film materials used in the IAMS system, as well as thermal testing that has been done to compare the IAMS materials to traditional MCPCB.

Transitioning Technology to the Warfighter

Mike Gentile - Director of the RF Alliance

The Radio Frequency (RF) Alliance is a non-profit organization focused on transitioning RF Technology. The RF Alliance works with government agencies, large and small businesses, and academic institutions to form partnerships and facilitate technology transition out of research and into programs of record or commercial applications. The RF Alliance also funds transition projects, including a project on gold reduction in Low Temperature Co-fired Ceramic (LTCC) packages and a project on tunable microwave filters. The gold reduction project replaces the gold in LTCCs with gold-plated silver and parts are currently undergoing accelerated life testing to demonstrate reliability. The tunable filter project uses piezoelectric actuators to tune the filters and focuses on manufacturability. Working with these teams we are developing technologies which will provide increased capabilities to the Warfighter.

Attending Vendors as of April 16:

Heraeus
Tropical Stencil
Specialty Coating Systems
Micro Screen
Foresite
Hi-Tek Sales

Heraeus

Heraeus Incorporated
Thick Film Materials Division
25 Adina Place
Lafayette, IN 47905
USA

Phone +1 (765) 429-8141
Mobile +1 (765) 430-5121
Plant +1 (610) 825-6050
E-Mail: larry.rexing@heraeus.com

Larry Rexing
Midwest Regional Sales Manager

Solving Adhesion Challenges for Electronics Packaging Applications

Dr. Rakesh Kumar - Vice President of Technology, Specialty Coating Systems

Adhesion is an important phenomenon in the industrial world, and its relevance to electronics applications is quite significant. Reliable packaging for electronics and electrical components are becoming increasingly challenging due to product long-term performance requirements.

In recent years, various thin-film coatings have been utilized for conformal barrier, surface modification and protection enhancement in an effort to enhance their overall reliability. However, one aspect of such advancement that is problematic relates to adhesion of such coatings to the surfaces of electronics and various other components. It has long been recognized that surface contamination, the presence of oxide layers, flux residues, and low surface energy substrates can lead to poor adhesion and to a reduction in the effectiveness of coatings or adhesives used in these devices and components.

Although development work continues to address various adhesion issues of coatings or adhesives with the exotic metal alloys and high surface energy plastic substrates used in electronics, a significant breakthrough has recently been achieved through the development of advanced adhesion systems. This paper provides an in-depth analysis of the existing adhesion problems of electronics and components and describes the new developments that have led to advanced adhesion solutions particularly suited to thin polymeric conformal coatings. In addition, it highlights some steps that electronics and component manufacturers can take to minimize or eliminate their initial adhesion failures. These advanced adhesion solutions have been successfully tested according to MIL-L 46058C and meets the requirements of IPC-CC-830.



Together, we can
control the temperature
with more power in less
space for fewer dollars.



Parker's patented two phase pumped liquid cooling system offers a new way to cool high heat generating systems where heat loads have moved beyond the means of traditional convection air and water cooling. Parker's phase change liquid cooling thermal management system can increase power densities for high power electronics by up to 40 percent. Check out our web site at www.powerelectronicscooling.com to learn more about this new technology.



ENGINEERING YOUR SUCCESS.

260.255.5108

Stan Bentley Thoughts on Manufacturing in the USA today

Stanley L. Bentley – Diversified Systems President/Owner

The assault on manufacturing in the US began a long time ago. The manufacturing base was so large and so diverse, that the impact was not quickly recognized. There was no single contributing factor. In fact, each industry was faced with somewhat different circumstances. Automotive was plagued with work rules that drove up the cost of labor. Electronics was impacted by the extreme cost of capital equipment and tax rules for depreciation. Consumer goods often had large amounts of hand labor, making them unprofitable when minimum wage laws were applied. While the list goes on, the real culprits were too very different forces: Corporate greed, and consumer thrift. Corporations were driven to extract higher profits while consumers demanded cheaper prices. The impact of these forces has not abated. The end result is an assault on manufacturing.



A Brand like a Friend

Steve Beigle
Senior Field Sales Engineer

Adhesive Technologies
Electronics Assembly Materials

Henkel Corporation
1130 Reder Road
Griffith, Indiana 46319, USA
Phone 219.922.7990
Mobile 219.629.5539
Fax 219.924.7989
Steve.Beigle@us.henkel.com
www.henkel.com/electronics

Energy Storage as an Integral "System of Systems"

Sam Stuart - Power & Energy Chief Engineer for the Power, Energy and Interconnect Technologies Division at Naval Surface Warfare Center Crane

As with some consumer electronic products, advanced military missions are enabled by newer batteries that are capable of storing more energy than their older counterparts. Harnessing these newer battery types to safely and reliably achieve military goals requires design and manufacturing approaches that share similarities with development of, and capabilities for commercial products. These approaches treat any given application's energy storage as an integral "system of systems" that encompasses multiple layers of interaction that must be measured, monitored and managed.

Fuel Economy Study for Vehicles With and Without Side Mirrors

Suresh Chengalva - Delphi

A large fraction of the power required to cruise at highway speeds is consumed in overcoming air resistance, and this percentage increases rapidly with increasing speed. Therefore, a vehicle with substantially better aerodynamics would tend to be much more fuel efficient. The removal of side mirrors would slightly reduce the frontal area and drag coefficient, resulting in a slight improvement in fuel economy. This report is to present a summary of the fuel economy study for vehicles with and without side mirrors. The study was based on existing and modified validated vehicle models and the simulation was conducted on PSAT platform; the vehicles models were carefully calibrated to match the standard EPA readings. This project was a joint effort between the Transportation Active Safety Institute (TASI) at IUPUI and Delphi Electronics & Safety.

Technical Presentation Schedule

Time	Speaker	Company	Presentation Title
1:00	Mitch Roob	Secretary of Commerce for the State of Indiana	Keynote Address: Indiana Economic Development Corporation
1:35	Suresh Chengalva	Delphi	Fuel Economy Study for Vehicles With and Without Side Mirrors
2:00	Stan Bentley	DSI	Stan Bentley Thoughts on Manufacturing in the USA Today
2:25	Sam Stuart	NSWC Crane	Energy Storage as an Integral "System of Systems"
2:50		BREAK	
3:00	Tom Sharpe	SMT Corporation	Keynote Address: Our National Security is Dependent on us to Keep Up With Counterfeiters' Techniques
3:50	Tracey Smolinsky	Heraeus	Comparison of Thermal Performance Between Heraeus IAMS and MCPCB Substrates
4:15	Dr. Rakesh Kumar	Specialty Coatings	Solving Adhesion Challenges for Electronics Packaging
4:40	Mike Gentile	RF Alliance Group	Transitioning Technology to the Warfighter

IMAPS
911 FRONT ROYAL DRIVE
INDIANAPOLIS, IN 46227-2775