

## August 2008

### In this Issue:

**Asian Roadmap Workshop Deemed a Success**

**TC Face-to-Face Review with TWG Chairs at Tyco Electronics, Harrisburg, PA**

**Recent TWG Name Changes Authorized by TC**

**2009 Roadmap Schedule**

**About the 2009 iNEMI Roadmap**

*This newsletter is completely dedicated to keeping you informed about the progress of the 2009 iNEMI Roadmap. Please pass it on to anyone within your technical network who might be interested in becoming involved in this effort. If this the first issue you've received and you would like to know more about the Roadmap, see About the 2009 iNEMI Roadmap at the end of the newsletter.*

### Recent Activity

#### **ITRS (International Technology Roadmap for Semiconductors) Summer Meeting**

Chuck Richardson represented iNEMI at the 2008 ITRS Summer Meeting in San Francisco from July 14-16 for the purpose of providing a liaison with the various ITWGs (International Technology Working Groups) within the ITRS and the iNEMI TWGs and PEGs. By attending and providing an iNEMI roadmap focal point, and input to the "Assembly and Packaging" and "Test" ITWGs, we expect to further the close relationship between the two roadmapping organizations.

Chuck also met with a representative of MIG (MEMS Industry Group) to try and forge a working relationship between their members and the iNEMI Roadmap Sensors TWG Chapter.

#### **Asian Workshop in Shanghai, China**

The iNEMI Asian Roadmap Workshop was held July 28 in Pudong, Shanghai at the Riverfront Business Hotel in conjunction with the ICEPT-HPD conference. The workshop was attended by 54 people, and there was excellent speaker/attendee interaction. The feedback from the attendees was positive and included excellent ideas for strengthening the TWGs' chapters. The workshop also had extended breaks, which allowed iNEMI staff, especially Asia Manager Dr. Haley Fu, the opportunity to meet with the attendees one-on-one. A summary put together by Bob Pfahl, iNEMI V.P. of Global Operations, from the three workshops (and previous roadmap meetings) has been distributed to all the TWG Chairs for their use in developing their chapters.

#### **iNEMI Technical Committee TWG Chapter Review**

##### **August 6, 2008, Harrisburg, Pennsylvania**

Tyco Electronics hosted the 2009 iNEMI Roadmap Technical Committee/TWG Chapter review meeting in Harrisburg, PA on August 6, 2008. The purpose of this all-day review was to provide constructive feedback to the TWG Chairs on their respective preliminary chapters so that they can factor the TC's input into their final versions (prior to the September 22 deadline).

## Changes for the 2009 Roadmap Cycle

The product sectors covered by our PEGs, and the technology/business topics covered by our TWGs, change according to their relevance to industry and to our members. For the 2009 Roadmap, we have dropped the Aerospace/Defense PEG and we have added three new TWGs and renamed three existing ones to better reflect their focus. New this year are chapters on Solid State Illumination, Item-Level Tag (we've decided to make it a stand alone chapter rather than include it in an existing chapter), and Photovoltaics. In addition, the decision was made to change the names of the Product Lifecycle Information Management (PLIM) TWG to simply Information Management, The Interconnect Substrates – Organic TWG to Interconnect PCB - Organic and the Organic and Printed Electronics TWG to Large Area, Flexible Electronics. The new TWG topics were added in response to increased industry interest in the opportunities and technology needs of these potential growth areas. We are also in danger of dropping two TWGs from this cycle that have yet to identify leaders (Energy Storage and Conversion Systems and Sensors).

## Upcoming Events

### **SMTA International Show and Conference**

The SMTA is holding their 2008 Conference and exhibition from August 17-21 at the Coronado Resort and Conference Center in Orlando Florida. On August 19, Chuck Richardson will be presenting a free one-hour session titled "2007 Roadmap – Process, Trends and Results/2009 Roadmap Preview." The presentation will be scheduled for 3:30-4:30 p.m. This presentation is one of the free special events that are open to all attendees.

## In the News

### **National Electronics Symposium on Small Scale Electronics**

The School of Engineering at Binghamton University co-sponsored, with GE Corporate Research in Niskayuna, NY (near Albany, NY), this event – and has for several years. The program is held at the GE Center. This year there were about 100 attendees, split between academia and industry. There were parallel sessions intended to provide engineers and researchers working on new packaging developments with a set of technical updates in their field. The program took place July 29 and 30, 2008. Chuck Richardson represented iNEMI and presented a paper written by Jim McElroy and Bob Pfahl entitled "A Proactive Approach to Improving Environmental Performance."

## Get Involved

Work is continuing to fill a few remaining openings for TWG leadership positions. We are presently requesting applicants for TWG Chairs for Energy Storage & Conversion Systems and Sensors.

If you have been thinking about serving the industry in a position of PEG or TWG Chair, please contact [Chuck Richardson](#), and I will work with you to decide if this is the cycle to get involved. It is not a requirement to be an iNEMI member to participate in roadmap development. In fact, the more diversified the representatives working on the roadmap, the broader the reach and the more valuable to the industry. With the wide range of technology categories, it should be easy to find one that stirs your interest and calls you to participate.

## 2009 Roadmap Schedule (Green font denotes recent change)

### 2008

January 4	Email Word version of 2007 TWG chapters and Executive Summary to each TWG Chair
January 9	Teleconference with TC on PEG Emulator review (Rescheduled from December 17, 2007)
January 11	Organizing teleconference with TWG Chairs
February 20-21	PEG workshop/TWG kick-off (hosted by Agilent Technologies in Santa Clara, CA) <ul style="list-style-type: none"> <li>Product sector spreadsheets completed – preliminary PEG chapter outlines written</li> <li>Cross-cut issues are initially addressed</li> </ul>
April 4	TC/PEG/TWG face-to-face chapter review meeting at APEX, Las Vegas, NV
May 7	Telecon with TWG Chairs, preliminary PEG Chapters due to staff
May 14	Open roadmap presentation in Herndon, VA
June 18	<b>European Roadmap Workshop at IMEC in Leuven, Belgium</b>
July 15	<b>TWG drafts due for TC review</b>
July 28	<b>Asian Roadmap Workshop in conjunction with ICEPT Shanghai, China</b>
August 6	TC face-to-face review with TWG Chairs at Tyco Electronics, Harrisburg, PA
September 21	<b>Final roadmap chapters due</b>
September 24	iNEMI Council of Members review of key issues, IPC Midwest, Schaumburg
October 31	Edit, prepare Appendices A-D, Executive Summary
November 20	“Go to press”
December 5	Ship to members

### 2009

1Q2009	Make copies available to industry
2Q2009	Industry presentation at APEX

### About the 2009 iNEMI Roadmap

As a reminder, and to inform new recipients, my name is Chuck Richardson (iNEMI’s Director of Roadmapping), and I am responsible for staff support of the roadmap effort. The roadmap is developed by volunteers from the industry (iNEMI members and non-members) that form groups to develop chapters for five Product Emulator Groups (PEGs) and 22 Technology Working Groups (TWGs), which cover technology and business/infrastructure areas.

### 2009 iNEMI Roadmap Product Emulator Groups (PEGs):

1. Automotive	3. Medical
2. Consumer/Portable	4. Netcom (Network, Datacom & Telecom)
	5. Office/Large Business Systems

The PEGs define OEM requirements for their respective product sectors, anticipating product technology and business-related needs over a 10-year horizon. These needs are presented in each PEG chapter, using key attribute spreadsheets and text according to templates that are furnished by the iNEMI Technical Committee. Each PEG has a Chair or Co-chairs and as many group members as needed for a broad-based view of that emulator’s scope (usually 2-5 individuals). PEG Chairs are expected to attend two to three face-to-face meetings during the 2007/2008 calendar year, but most of the group’s work is done by telephone and over the web.

The TWGs use the OEM requirements detailed in the five PEG chapters to prepare each of their roadmap chapters, detailing where their respective technology stands today — and expects to progress over the next 10 years — with respect to the stated needs. Other than the TWG Chairs, who are expected to attend a minimum of three meetings, no travel is required to participate in a TWG, and this activity requires only as many hours as you want to dedicate to it, depending upon how involved you wish to be.

<b>2009 iNEMI Roadmap Technology Working Groups (TWGs):</b>	
1. Board Assembly	11. Large Area, Flexible Electronics
2. Connectors	12. Packaging
3. Energy Storage and Conversion Systems	13. Passive Components
4. Environmentally Conscious Electronics	14. Photovoltaics
5. Final Assembly	15. Information Management
6. Interconnect Substrates - Ceramic	16. RF Components & Subsystems
7. Interconnect PCB - Organic	17. RFID Item-Level Tag
8. Mass Data Storage	18. Semiconductor Technology
9. Modeling, Simulation & Design Tools	19. Sensors
10. Optoelectronics	20. Solid State Illumination
	21. Test, Inspection & Measurement
	22. Thermal Management

The iNEMI Roadmap has become recognized as an important tool for defining the “state of the art” in the electronics industry as well as identifying emerging and disruptive technologies. It also includes keys to developing future iNEMI projects and setting industry R&D priorities over the next 10 years.

With the globalization of the roadmap, each edition becomes even more important as a tool for identifying technology gaps and possible solutions for an increasingly global industry. One example of this fact is the recent declaration by the EU (European Union) that in order for an entity to get funding from them they would have to show a need for the project as identified in either the iNEMI Roadmap on Organic & Printed Electronics or the VDMA (OE-A) (Organic Electronics Association) roadmap. If you would like to be involved with the 2009 iNEMI Roadmap team, or be added to the mailing list of this monthly newsletter, please contact Chuck Richardson at [Chuck.Richardson@inemi.org](mailto:Chuck.Richardson@inemi.org).