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Welcome to the 2009 Roadmap Cycle

Welcome to the eighth newsletter of the 2009 iNEMI Roadmap cycle. This and subsequent newsletters will be completely dedicated to keeping you informed about the progress of the 2009 iNEMI Roadmap. Please pass this newsletter on to anyone within your technical network who might be interested in becoming involved in this effort.

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. Since I don't know how familiar you are with the roadmap, I would like to give you a quick overview of its make-up. 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 20 Technology Working Groups (TWGs), which cover technology and business/infrastructure areas. The number of PEG and TWG Chapters are subject to change as evidenced by recent decisions deleting the Aerospace/Defense PEG and adding a new TWG to address Solid State Illumination this cycle.

Work has been proceeding within iNEMI on an Item Level Tag roadmap document initiative with thoughts of making it either a standalone chapter of the 2009 iNEMI Roadmap or encompassing it as a part of another existing chapter – such as the Printed Electronics TWG or RF Components & Subsystems TWG. I will let you know of any new changes in future newsletters.

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.

2009 iNEMI Roadmap Technology Working Groups (TWGs):	
1. Board Assembly	11. Organic & Printed Electronics
2. Connectors	12. Packaging
3. Energy Storage and Conversion Systems	13. Passive Components
4. Environmentally Conscious Electronics	14. PLIM (Product Lifecycle Information Management)
5. Final Assembly	15. RF Components & Subsystems
6. Interconnect Substrates - Ceramic	16. Semiconductor Technology
7. Interconnect Substrates - Organic	17. Sensors
8. Mass Data Storage	18. Solid State Illumination
9. Modeling, Simulation & Design Tools	19. Test, Inspection & Measurement
10. Optoelectronics	20. Thermal Management

Recent Activity

The [2009 iNEMI Roadmap PEG Workshop and TWG North American kick-off meeting](#) was hosted by Agilent Technologies in their Santa Clara, CA facility on February 20 and 21, 2008, respectively. The meeting attracted about 60 people on day 1 to hear: (1) an iNEMI welcome and overview of the agenda by Bob Pfahl; (2) a presentation on the roadmap process and schedule by me; (3) a welcome and overview of Agilent, and specifically Agilent Labs, presented by the host executive Darlene Solomon; (4) a presentation from Juan-Antonio Carballo speaking about the collaboration and cooperation between the ITRS (International Technology Roadmap on Semiconductors) Design TWG (Technical Working Group) and iNEMI PEGs (Product Emulator Groups); and (5) presentations from each of the five PEGs that spoke to their views on perceived changes from 2007, highlights they expect to focus on for 2009 and a short status of their chapter and key attributes spreadsheet work.

The second day was dedicated to a short roadmap process overview presentation by me, followed by morning breakout sessions for all the TWG representatives to caucus and plan for the new cycle while mingling with other TWGs that they perceived as cross-cutting. Following lunch, each attending TWG was given the opportunity to report out on their planning session and to discuss the status of their groups. [Click here](#) for the final agenda for both days.

Copies of all the presentations have been placed on the iNEMI FTP sites dedicated to the PEGs' and TWGs' roadmapping use. Please contact your PEG/TWG Chair for login and password information and access.

iNEMI wishes to thank all the attendees for an energetic meeting and Agilent Technologies, particularly Mike Davisson and Darlene Solomon for hosting this important meeting on such short notice. All the attendees were struck by the excellent meeting environment, facilities and hospitality.

Upcoming Events

The next meeting for the 2009 iNEMI Roadmap cycle is a status review with the iNEMI Technical Committee and PEG/TWG Chairs (representative) on April 4, 2008 in conjunction with APEX 2008 in Las Vegas. Please plan to attend this meeting if you are a PEG or TWG Chair or are asked to represent your PEG or TWG to give a short status update on your respective group for the iNEMI Technical Committee. To access hotel and all manner of useful information concerning the T.C. review meeting at the Mandalay Bay Resort Hotel, please go to <http://www.inemi.org/cms/calendar/APEX08.html>. From this web page you can get information on the hotels as well as see other iNEMI events that will be held the week of APEX. **The review portion of the T.C. meeting is scheduled to run from 10:00 a.m. to 1:20 p.m. and call-in capability will be provided so that any PEG or TWG not able to send a representative to the meeting will have the opportunity to call in and report remotely. If you are attending in person, please register at <http://www.inemi.org/register.php?id=45> and plan to arrive at the meeting room at 9:45 AM so that the reviews can start at 10:00 AM sharp. If you plan to call in please contact me for access code and password. There will be a light, working lunch provided.**

**Preliminary Agenda
iNEMI Technical Committee Roadmap Status Review
April 4, 2008
Trade Winds E Room
Mandalay Bay Resort Hotel
Las Vegas, Nevada**

Friday, April 4, 2008

TIME:	TOPIC:	DISCUSSION LEADER:
8:00 AM	Technical Committee Business Meeting	Bob Pfahl
9:45 AM	Break	
10:00 AM	Intro to Chapter Status Update from PEG/TWG Chairs:	Chuck Richardson
10:20 AM	Automotive PEG Status	Jim Spall
10:27 AM	Consumer/Portable PEG Status	Susan Noe
10:34 AM	Medical PEG Status	Anthony Primavera
10:41 AM	Office/Large Business Systems PEG Status	David Lober, David Copeland
10:48 AM	Netcom PEG Status	John Duffy
10:55 AM	Break	
11:02 AM	Board Assembly TWG Status	Dongkai Shangguan
11:09 AM	Connectors	John McWilliams
11:16 AM	Energy Storage & Conversion TWG Status	TBD
11:23 AM	Environmentally Conscious Electronics TWG Status	TBD
11:30 AM	Final Assembly TWG Status	John Allen
11:37 AM	Interconnect Substrates – Ceramic TWG Status	Howard Imhof

11:44 AM	Interconnect Substrates – Organic TWG Status	Jack Fisher
11:51 AM	Mass Data TWG Status	Roger Hoyt
11:58 AM	Modeling, Simulation & Design Tools TWG Status	Yishao Lai
12:05 PM	Optoelectronics TWG Status	Dick Otte
12:12 PM	Organic & Printed Electronics TWG Status	Dan Gamota
12:19 PM	Packaging TWG Status	Bill Bottoms
12:26 PM	Passive Components TWG Status	Philip Lessner
12:33 PM	Product Life Cycle Information Management	Eric Simmon
12:40 PM	RF Components & Subsystems TWG Status	Ken Harvey
12:47 PM	Semiconductor Technology TWG Status	Alan Allan
12:54 PM	Sensors TWG Status	TBD
1:01 PM	Solid State Illumination	Marc Chason
1:08 PM	Test, Inspection & Measurement TWG Status	Mike Reagin
1:15 PM	Thermal Management TWG Status	Ravi Prasher
1:22 PM	Summary/Close	TBD

2009 Roadmap North American Workshop May 14, 2008; Herndon, Virginia

It is not too early to begin making plans for the 2009 iNEMI Roadmap North American Workshop being held at iNEMI headquarters in Herndon, VA, May 14, 2008. The day will be allotted to TWG presentations and extended breaks to assure an ample opportunity for discussion between attendees and presenters. We have typically invited an audience made up of invited industry representatives that are not directly involved in the roadmap development in order to get objective feedback for the TWG Chairs. The cost to paid attendees is \$300.00 (waived for speakers and iNEMI members) and includes a continental breakfast, lunch and a copy of the 2009 roadmap (a \$250.00 value) when it is released for sale in March of 2009. [Click here](#) for details and a preliminary agenda.

Get Involved

Work is continuing to fill a few remaining openings for both PEG and TWG leadership positions. We are presently requesting applicants for the positions of several PEG Co-chairs. We also need TWG Chairs for: Environmentally Conscious Electronics, Energy Storage & Conversion Systems, and Sensors. I would like to welcome the new Final Assembly TWG Chair John Allen from Celestica. At the last T.C. meeting the decision was made to drop any TWG chapters without leadership identified by the April 4 meeting from this cycle's roadmap.

iNEMI would like to thank Steven Davidson, Delphi, for his excellent leadership of the Final Assembly TWG for the last cycle. His leadership has raised the bar for this and other TWG chapters. We are happy to report that Steven has plans to help develop the 2009 Final Assembly TWG.

If you have been thinking about serving the industry in a position of PEG or TWG Chair, please contact me, 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.

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 iNEMI Roadmap, each edition of the roadmap should become 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.

2009 Roadmap Schedule (Green font denotes recent change)

2007

3Q2007	Recruit product sector champions and teams, and refine data charts Begin publication of 2009 Roadmap Newsletter Distribute 2007 PEG chapters
4Q07	Product sector champions develop emulators
September 13	Teleconference with PEG Chairs
September 25	TWG/PEG Chairs meet to discuss key attributes (at IPC Midwest; Schaumburg, IL)
October 12	Roadmap PEG kick-off with PEG/TWG/TC (at SMTAI; Orlando, FL)
November 14	Roadmap kick-off in Europe (at Productronica; Munich, Germany)

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"> • Product sector spreadsheets completed – preliminary PEG chapter outlines written • Cross-cut issues are initially addressed
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 TBD	European Roadmap Workshop at a location to be determined
July TBD	Asian Roadmap Workshop in Shanghai, China
July 1	TWG drafts due for TC review
August 6-7	TC face-to-face review with TWG Chairs at Tyco Electronics, Harrisburg, PA
September 21	Final roadmap chapters due
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