

Convergence 2008

Technical Session Schedule

As of 10/26/2008 07:40 pm

Monday, October 20

Human Machine Interface

Session Code: CNVG3

Room O2-33

Session Time: 2:00 p.m.

With increasingly diverse functions being introduced into automobiles, Human Machine Interface (HMI) plays a critical role in modern age automobiles. How the driver reacts to the HMI will greatly determine the functionality of these systems. Also, understanding the behavior of drivers will enable a more effective design of these functions. This session will cover the subject from a broad perspective, ranging from infotainment to safety, and provide insight into why and how drivers should be able to interact effectively with automobiles.

Some aspects considered include:

- Naturalistic driver behavior observation
- HMI Guidelines and their background
- Psychological perspective
- Dependency
- Encourage positives (driver support) and avoiding negatives (driver distraction)

Organizers - Hiroshi Tsuda, Nissan Technical Center NA Inc.; Andreas Eppinger, Johnson Controls GmbH; Terry L. Helgesen, DENSO International America Inc.; Norimasa Kishi, Nissan Motor Co., Ltd.; Toshiro Muramatsu, Nissan Technical Center NA Inc.; Gerald Neely, Sirius XM Radio, Inc.; Douglas Patton, DENSO International America Inc.

Chairpersons - Hiroshi Tsuda, Nissan Technical Center NA Inc.; Andreas Eppinger, Johnson Controls GmbH

Time	Paper No.	Title
2:00 p.m.	2008-21-0001	The Relative Risks of Secondary Task Induced Driver Distraction Thomas A. Dingus, Sheila G. Klauer, Virginia Tech Transportation Institute
2:30 p.m.	2008-21-0005	Safe and Pleasurable Human Machine Interfaces for Automobiles Ralph Bruder, Bettina Abendroth, Muriel Didier, Michael Schreiber, Margeritta von Wilamowitz-Moellendorff, Darmstadt Univ. of Technology
3:00 p.m.	2008-21-0002	Driver Interface/HMI Standards to Minimize Driver Distraction/Overload Paul Green, Univ. of Michigan Transportation Research Institute (UMTRI)
3:30 p.m.	2008-21-0003	JAMA Guideline for In-Vehicle Display Systems Yukinobu Nakamura, HMI Experts Group, JAMA, (Honda R&D Co., Ltd.)
4:00 p.m.	2008-21-0004	User-centered Human-Machine-Interaction (HMI) Design for Automotive Systems Gert-Dieter Tuzar, Johnson Controls GmbH

Monday, October 20

Connected Vehicle

Session Code: CNVG7

Room O2-44

Session Time: 2:00 p.m.

The notion that a vehicle is connected to cellular phones and consumer electronics devices has now reached mass product reality. What is next? Vehicles connecting to the fixed roadside infrastructure and to the mobile roadway "infrastructure," including other vehicles are examples of concepts that are in various stages of experimentation now. Vehicle to vehicle (V2V) communication and vehicle to infrastructure (V2I) communication will define the connected vehicle of tomorrow.

This session targets the key business and technical issues surrounding -

- Data driven observations of customer trends, needs, and desires for vehicle interconnectivity
- Wireless-based diagnostic and service systems
- Internet connectivity
- Infotainment systems and connectivity
- Wireless infrastructure connectivity
- Car-to-car and car-to-roadside connectivity

In addition, we will also discuss the non- technical aspects of these technologies including:

- Current services and developing activities in US, Europe and Asia.
- Customer value or social value of these technologies.
- Improvements in safety, environment, comfort and efficient transportation.

Organizers - Takeshi Mitamura, Nissan Motor Co.; Leonard Tedesco, Laird Technologies; Bruce Emaus, Vector CANtech Inc.; Norimasa Kishi, Nissan Motor Co., Ltd.; Toshiro Muramatsu, Nissan Technical Center NA Inc.; Venkatesh Prasad, Ford Motor Co.; Hakan Kostepen, Panasonic Automotive Electronics Co.

Chairpersons - Leonard Tedesco, Laird Technologies; Norimasa Kishi, Nissan Motor Co., Ltd.; Bruce Emaus, Vector CANtech Inc.

<i>Time</i>	<i>Paper No.</i>	<i>Title</i>
2:00 p.m.	2008-21-0006	Connecting Vehicles in the Social Domain: Web 2.0 In the Vehicle T.J. Giuli, Ford Motor Co.
2:30 p.m.	2008-21-0007	Emerging US Location Based Wireless Services, Infrastructure, Vehicle Connectivity, Vehicle Architecture and Challenges Hakan Kostepen, Jerry Rathje, Panasonic Automotive Systems Co. of America
3:00 p.m.	2008-21-0008	The Connected Vehicle Proving Center: A Collaborative, Architecture-Neutral Development Environment Scott J. McCormick, Connected Vehicle Trade Association
3:30 p.m.	2008-21-0009	Vehicle Infrastructure Integration (VII) Update David D. Henry, Chrysler LLC
4:00 p.m.	2008-21-0010	Wireless-enabled Safety Services in California: VII California, Intersection Safety and Other Emerging Innovations James A. Misener, Univ. of California at Berkeley
4:30 p.m.	2008-21-0011	Launch ITS from Yokohama, Japan - Progress of an ITS Field Operational Test for Traffic Safety and Congestion Masao Fukushima, Nissan Motor Co. Ltd.

Monday, October 20

Powertrain Challenges and Solutions for Sustaining Individual Transportation and Protecting the Environment

Session Code: CNVG6

Room O3-45

Session Time: 2:00 p.m.

Powertrain solutions are needed to address the challenge of limited fossil fuels, global warming concerns, and increasing demand for individual transportation. The focus of this session is to review powertrain challenges, solutions and thoughts related to sustaining individual transportation and protecting the environment. Topics will include lower emissions, reduced fuel consumption, improved driving dynamics / safety, and driving pleasure / comfort. Additional perspectives may also be given on global government and industry activities related to these powertrain challenges. This session will examine the progress in gasoline and diesel engines, hybrid systems, transmissions and migration toward alternative fuels. New features such as start-stop systems and regenerative braking are being introduced and further developed. Beyond these initial technologies, next generation hybrid and electric powertrains will drive higher electrification of the vehicle wherein power electronics and advanced batteries are critical.

Organizers - Erhard Musch, *ELMOS Semiconductor AG*; Christopher S. Cook, *Infineon Technologies*; Michael J. McCandlish, *Elmos NA Inc.*; Shawn Slusser, *Infineon Technologies*; Patrick Leteinturier, *Infineon Technologies AG*; Prabhakar Patil, *Compact Power Inc.*; Mark S. Rauchfuss, *MSR Consulting and Engineering Inc.*; Mike Vitek, *MBtech Group*

Chairpersons - Christopher S. Cook, *Shawn Slusser, Infineon Technologies*

Time	Paper No.	Title
2:00 p.m.	2008-21-0012	Powertrain Regional Challenges and Solutions <i>Kent E. Helfrich, General Motors Powertrain</i>
2:30 p.m.	2008-21-0013	Electrifying Our Way to Fuel Economy: Regulatory Perspectives on Hybrid Vehicles <i>Gustavo O. Collantes, Harvard Univ.</i>
3:00 p.m.	2008-21-0014	Advanced Engine and Transmission Management: Key Levers to Bring Down CO2 Emissions now <i>Wendelin Klügl, Continental AG</i>
3:30 p.m.	2008-21-0015	Controller for Rapid Development of Advanced Mode Combustion Algorithms using Cylinder Pressure Feedback <i>Ash Punater, Gene Ripley, Karl Schten, Delphi Corp.</i>
4:00 p.m.	2008-21-0016	Study of Suitability of Hybrid Architectures for Different Market Requirements <i>Shailesh S. Kozarekar, Venkateswara Anand Sankaran, Kevin L. Newman, Ford Motor Co.</i>
4:30 p.m.	2008-21-0017	Efficient Batteries for Transportation Applications <i>Mohamed Alamgir, Compact Power, Inc.; Ann-Marie Sastry, Univ. of Michigan</i>

Monday, October 20

Welcome and Introductions - Andreas Schell, Vice President Engineering Core, Electrical/Electronics, Chrysler

Session Code: CNVGW1

Room Riverview Ballroom

Session Time: 9:00 a.m.

Monday, October 20

Keynote - Mel Karmazin, Chief Executive Officer, Sirius XM Radio Inc. - "Finding Opportunity in the Perfect Storm"

Session Code: CNVGK1

Room Riverview Ballroom

Session Time: 9:10 a.m.

[Biographies and photos](http://www.sae.org/events/convergence/keynote.htm). Rapidly declining demand for new cars, tightening credit standards, erosion of vehicle leasing, escalating fuel prices, alternative energy goals, new competitive threats, emerging technology and infrastructure, consumer lifestyle changes all leads to a "perfect storm" for the Automotive Industry. How does the industry find opportunity in this challenging environment, and deliver the right technology to meet real customers' needs. The keynote will include a Q&A session with an opportunity for the audience to talk openly with an industry icon who has repeatedly created success during turbulent times in the entertainment and media industry.

Moderators - Larry L. Fobes, Wayne State Univ.

Keynote Speakers - Mel Karmazin, Sirius Satellite Radio

Monday, October 20

Blue Ribbon Panel - Connected and Autonomous Vehicles

Session Code: BR

Room Riverview Ballroom

Session Time: 10:00 a.m.

CUSTOMERS have spoken and they want to be able to safely use their time in their vehicles to do a wide variety of tasks in addition to driving. And, TECHNOLOGY is responding with exciting opportunities like autonomous vehicles and vehicle-to-vehicle communications. Will our future include "virtual valet parking" and "virtual chauffeurs"? Are "driverless" vehicles possible? If so, what roadmap will they follow? Will we eventually see "cars that don't crash"? These far reaching questions and many others will be explored by a diverse panel of industry experts. For sure, our CUSTOMERS have a very exciting future to look forward to. [Biographies and photos](http://www.sae.org/events/convergence/brpanel.htm).

Organizers - Larry Burns, General Motors Corp.

Moderators - Larry Burns, General Motors Corp.

Panelists - Paul R. Brubaker, Administrator, US Dept. of Transportation, Research & Innovative Technology; Peter E. Rieth, Sr. VP Sys. & Tech., Mbr of the Mgt Board, Div. Chassis & Sfty, Continental; Anup Sable, VP - Automotive Line of Business, KPIT Cummins Infosystems, Ltd.; Chris Urmson, Assistant Research Professor, Carnegie Mellon Univ.; John M. Waraniak, VP of Vehicle Technology, Specialty Equipment Market Association (SEMA);

Tuesday, October 21

The Need For Standards In The Automotive World

Session Code: CNVG4

Room O2-33

Session Time: 2:00 p.m.

While other industries embrace a high level of standards, the automotive world does not push the introduction and adoption of standards to the same level. But standards are necessary to cope with future automotive challenges.

Standardization of architectures and components is an important element to transform the visions of zero emissions and collision avoidance into reality.

With a price range of \$3000 to \$300,000+ for new cars on the world market, the industry must deal with enormous product variation. Today's car includes a microcosm of our daily life. The car offers all kinds of comfort; like a living room, cool drinks, and entertainment. The car can be used as an office, and the driver can establish all kinds of interconnectivity with the outside world.

As built-in electronics increase exponentially, it becomes more and more difficult for the OEMs and their suppliers to master such a complex collection of different functions within each vehicle.

Accomplishing this immense task is only possible by introducing and strictly following defined standards. All major participants have to work together to define, introduce, and maintain these different types of standards. But standards should not be used to make the vehicle features uniform; rather standards must support competition and not reduce it. This can be done by using standards for those functions, which are noncompetitive.

In the past, many presentations were held at Convergence regarding standards. We continue this tradition and increase our focus on the new business and technical requirements.

Organizers - Helmut Fennel, Continental; Bruce Emaus, Vector CANtech Inc.; Kevin Kott, dSPACE Inc.

Chairpersons - Helmut Fennel, Continental

Time	Paper No.	Title
2:00 p.m.	2008-21-0018	The Need for Safety-Related Software Development Standards <i>David D. Ward, MIRA, Ltd.</i>
2:30 p.m.	2008-21-0019	AUTOSAR on the Road <i>Gerulf Kinkelin, Alain Gilberg, Bertrand Delord, PSA Peugeot Citroën; Harald Heinecke, Simon Fürst, BMW Group; Juergen Moessinger, Andreas Lapp, Bosch; Ulrich Virnich, Stefan Bunzel, Continental; Thomas Weber, Noë Spinner, Daimler; Lennart Lundh, Daniel Svensson, Ford Motor Co.; Peter Heitkämper, Fredrik Mattsson, General Motors; Kenji Nishikawa, Hiroyuki Hirano, Toyota Motor Corp.; Klaus Lange, Bernd Kunkel, Volkswagen</i>
3:00 p.m.	2008-21-0020	Economically Driven Embedded Controls Development Tool Choices Supported by ASAM Standards <i>Timothy Foster, ETAS Inc</i>
3:30 p.m.	2008-21-0021	Security and Protection Aspects of Automotive Architectures for External Influences <i>B.S. Nagabhushana, KPIT Cummins Infosystems, Ltd.</i>
4:00 p.m.	2008-21-0022	Standards for Electric/Electronic Components and Architectures <i>Juergen Becker, Oliver Sander, Michael Hübner, Karlsruhe Institute of Technology; Matthias Traub, Thomas Weber, Jürgen Luka, Vera Lauer, Daimler AG</i>
4:30 p.m.	2008-21-0023	Making FlexRay a Reality in a Premium Car <i>Jens Kötz, Audi AG; Stefan Poledna, TTTech Automotive GmbH</i>

Tuesday, October 21

Sustainability / Environment

Session Code: CNVG8

Room O2-44

Session Time: 2:00 p.m.

The automotive industry is challenged to meet the increasing global demand for personal mobility while developing alternative solutions for sustainable non-fossil fuels or other renewable energy sources. This effort is driving the move toward recyclability of all vehicle system components and enhanced promotion of eco-friendly products and factories.

This session explores the technologies available or being developed to meet these challenges. It will also look at the roles that governments, industry and academia are expected to play in the development and introduction of environmentally responsible and economically sound medium and long-term technology solutions.

Organizers - Mark A. Rakoski, Mitsubishi Electric Automotive America; Richard P. Burns, Yazaki North America; Fred Flett, Siemens VDO; Timothy Frasier, Robert Bosch Automotive Grp

Chairpersons - Mark A. Rakoski, Mitsubishi Electric Automotive America; Timothy Frasier, Robert Bosch Automotive Grp

Time	Paper No.	Title
2:00 p.m.	2008-21-0025	Product Policy for Eco-Conscious Design and Its Applications in Automotive Products <i>Motohiro Tanaka, Mitsubishi Electric Corp.</i>
2:30 p.m.	2008-21-0026	Wood-to-Wheels: A Multidisciplinary Research Initiative in Sustainable Transportation Utilizing Fuels and Co-Products from Forest Resources <i>David R. Shonnard, Jill R. Jensen, Jeffrey D. Naber, Qiong Zhang, Ann L. Maclean, Kathleen E. Halvorsen, John W. Sutherland, Timothy L. Jenkins, Christopher Polonowski, Michigan Technological Univ.</i>

3:00 p.m.	2008-21-0027	Environmentally-Friendly Plastics for Automotive Industry <i>Troy Robinson, Jian-Feng Zhang, Jin Zhu, Leonid Grigorian, Yazaki Technical Center America</i>
3:30 p.m.	2008-21-0028	Lean, Light and Quiet: Advances in Automotive Energy Efficiency Through Biomimetic Design <i>Peter S. Fiske, PAX Scientific, Inc.; Jayden Harman, PAX Scientific Inc.; Kim Shekar, PAXFan LLC</i>
4:00 p.m.	2008-21-0029	"Remanufacturing": The Sustainable Service Solution for Past Model Automotive Electronics Support <i>Joseph W. Kripli, Flight Systems Electronics Group</i>

Tuesday, October 21

Advanced Safety: How Far Can We Go? Will Our Customer Go There?

Session Code: CNVG5

Room O3-45

Session Time: 2:00 p.m.

Analysis of real world crash data shows that nearly seventy-five percent of crashes occur due to driving task errors, with an additional fourteen percent occurring due to impairment. This means that ninety percent of the problems, generally, are driver related. It is, therefore, important to help the drivers overcome their deficiencies in their driving performance and judgment by judicious use of technologies. As it is, drivers vary in their ability to safely drive their vehicles. There are many reasons for this variability. Lack of driving experience and training, errors in judgment, coping with driving task demands, deficiencies in information processing capabilities and other such factors contribute greatly to the variability in driving capabilities. This session, therefore, explores the technologies that exist which could be of assistance to drivers in overcoming their deficiencies. The session identifies technologies that are able to reduce the severity of crashes when they occur or mitigate injuries in crashes that would have otherwise been lethal. In addition, the session attempts to qualify and quantify the safety benefits where possible (e.g., reduced stopping distance, reduction of crash energy, etc.). The need to design and verify safety critical algorithms and embedded systems for real world applications which must be affordable to deliver and meet guaranteed performance over the broad array of complex roadway, vehicle to vehicle, and drive scenarios will also be highlighted and solutions suggested. Finally, the customer's perspective will be addressed with particular attention paid to driver workload and driver acceptance.

Organizers - *Jon Friedman, The MathWorks Inc.; Deepak K. Goel, TechUServe; Toyohei Nakajima, Honda R&D Co., Ltd.; Patrick Popp, General Motors Corp.; Robert W. Schumacher, Delphi Electronics*

Chairpersons - *Jon Friedman, The MathWorks Inc.*

Time	Paper No.	Title
2:00 p.m.	2008-21-0030	Motor Vehicle Safety in the Global Environment <i>Robert C. Lange, General Motors Corp.</i>
2:30 p.m.	2008-21-0031	Advanced Driver Assist System its Challenges and Solution from Customer Point of View <i>Toyohei (Tony) Nakajima, Honda R&D Co., Ltd.</i>
3:00 p.m.	2008-21-0032	A Strategy to Partition Crash Data to Define Active-Safety Sensors and Product Solutions <i>William B. Hanna, Glenn R. Widmann, Delphi Corp.</i>
3:30 p.m.	2008-21-0033	Model-Based Design for Safety-Related Applications <i>Ines Fey, Safety and Modeling Consultants; Jürgen Müller, Carmeq GmbH; Mirko Conrad, The MathWorks Inc.</i>
4:00 p.m.	2008-21-0034	Telematics - the Essential Cornerstone of Global Vehicle and Traffic Safety <i>Peter E. Rieth, James Remfrey, Continental</i>
4:30 p.m.	2008-21-0035	Potential Methods for Implementing Unmanned Agricultural Vehicles <i>Zachary T. Bonefas, Stewart Moorehead, John Deere & Co.</i>

Tuesday, October 21

Welcome and Introductions - Andreas Schell, Vice President Engineering Core, Electrical/Electronics, Chrysler

Session Code: CNVGW2

Room Riverview Ballroom

Session Time: 9:00 a.m.

Tuesday, October 21

Keynote - Gene Kranz, former NASA Director Mission Operations and author of "Failure is Not an Option"

Session Code: CNVGK2

Room Riverview Ballroom

Session Time: 9:15 a.m.

As the leader of the "Tiger Team" of flight directors who brought the Apollo 13 spacecraft safely back to Earth on April 17, 1970, Gene Kranz demonstrated extraordinary courage and heroism. An extraordinarily gifted leader and motivator, Kranz inspired his Tiger Team to hold fast to the highest standards possible. Together, they struggled to devise the plan that would safely bring the ship and its crew of three astronauts home after its oxygen system failed. </p>

"Failure is not an option," the motto that carried him through the Apollo 13 crisis, is a major theme of his motivational speeches today. Kranz speaks with passion and pride about the NASA employees who formed his mission teams - teams that worked hard and made history in the 1960s and '70s. He explains that his flight directors were young engineers and scientists, most of them in their twenties, having come to NASA fresh out of school with little work experience, but with abundant energy, and the will to succeed at one of humankind's most challenging endeavors: space exploration. </p><p>The Apollo 13 crisis pushed Kranz and his team to the brink of fear and doubt, but they refused to give in to these emotions or to succumb to panic. Instead, under his leadership, they worked together to save the imperiled spacecraft, and brought the ship and crew safely home. Kranz speaks with a raw brilliance about the challenges and problems that they successfully faced and overcame, giving his audiences the inspiration that they need to face down challenges and adversity in their own lives and careers.

Biography and photo.

Keynote Speakers - Eugene Kranz, NASA Johnson Space Center

Tuesday, October 21

Moderated Panel Discussion: Car Makers Speak

Session Code: MP

Room Riverview Ballroom

Session Time: 10:00 a.m.

The Car Makers Speak Moderated Panel has been one of the consistent highlights at each Convergence. Consisting of top electrical engineers from the world's major carmakers in a lively give-and-take, the panelists will discuss a number of vital subjects including global E/E standards, the open source business model, software development tools, the challenges carmakers face and how suppliers can help, system architecture, and some of the major trends of the day.

Biographies and photos.

Organizers - Paul M. Hansen, The Hansen Report on Automotive Electronics

Moderators - Paul M. Hansen, The Hansen Report on Automotive Electronics

Panelists - James A. Buczkowski, Director, Global E/E Systems Engrg., Ford Motor Co.; Toyohi Nakajima, Senior Chief Engineer, Honda R&D Co., Ltd.; Günter Reichart, VP Driver Assistance, Body E/E Networks, BMW AG; Andreas Schell, VP E/E Engineering Core, Chrysler Corp.; Chris Thibodeau, Director, Global Technology Engineering, E/E, General Motors Corp.;

Wednesday, October 22

Targeting Consumer Needs In The Perfect Storm

Session Code: CNVG1

Room O2-33**Session Time: 2:00 p.m.**

The moment of true Convergence is upon us. A rapid change in the lifestyle of the automotive consumer, coupled with the desire of consumers to leverage digital content of all forms in their daily life has created a Perfect Storm of consumer desires. As an industry, we are overwhelmed with the possibilities to create a compelling new consumer experience. We also face a monumental challenge of focusing on the true essence of targeting the most meaningful enhancements to the in vehicle experience.

How do we adapt to the rapid evolution of features we are seeing in the consumer electronics and connectivity markets? How do we more accurately predict the future driving lifestyle of our consumers? How do we perfect our ability to create the right feature at the right moment?

This session will explore research and implementation methods that have proven to improve the targeting process for companies in automotive, technology, and general consumer sectors. We will also highlight success stories from our industry, as well as others, to give insight into finding the Right Idea at the Right Moment in the Perfect Storm.

Organizers - Michael Burk, Panasonic; Kenric Miller, Freescale Semiconductor; Doug Pergament, SIRIUS XM Radio, Inc.; Venkatesh Prasad, Ford Motor Co.; Cary A. Wilson, Panasonic Automotive System of America

Chairpersons - Michael T. Burk, Panasonic Automotive System of America; Venkatesh Prasad, Ford Motor Co.; Doug Pergament, SIRIUS XM Radio, Inc.

Time	Paper No.	Title
2:00 p.m.	2008-21-0036	3M Customer Inspired Innovation Timothy V. Stagg, Sharon Wang, John Horn, 3M
2:30 p.m.	2008-21-0037	Understanding Consumer Needs: The Enduring Legacy of Konosuke Matsushita Paul Liao, Panasonic Corporation of North America
3:00 p.m.	2008-21-0038	"Targeting Consumer Needs in the Perfect Storm: Changing the Automotive Lifestyle" Douglas S. Pergament, SIRIUS XM Radio, Inc.
3:30 p.m.	2008-21-0039	Competitive Opportunity Management Dana W. Clarke, Sr., William C. Pine, Jr., Applied Innovation Alliance, LLC
4:00 p.m.	2008-21-0050	An Environmentally Aware Auto - Teaching the Car About the World Around It Patrick Curley, Tele Atlas North America Inc.

Wednesday, October 22**Product Development in a Global Environment Today and in Future****Session Code: CNVG2****Room O2-44****Session Time: 2:00 p.m.**

In a global environment complexity of product development has increased in recent years. As well as development processes in decentralized world wide operating (and developing) companies, product specifications for worldwide markets are underlying increasing demands. High efforts in standardizing processes and products are made to overcome this situation.

The speed of innovation and development in electronic HW and SW has gained in pace demanding a high level of maturity for all involved processes like development, test and production to ensure quality of products.

The session addresses the fields of specification, process and testing.

Organizers - Wolfgang Runge, ZF Lenksysteme GmbH; Edward E. Mabley, KPMG; Gerald Karch, ZF Lenksysteme GmbH; Kevin Kott, dSPACE Inc.

Time	Paper No.	Title
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2:00 p.m.	2008-21-0040	Framework to Aid Process Maturity Model Definition for Product Development in Global Environment Somashekhhar R H, KPIT Cummins Infosystems, Ltd.
2:30 p.m.	2008-21-0041	To Test the Need and the Need to Test - Testing the Smart Controller Network for the Chassis of Tomorrow Harald Deiss, Horst Krimmel, Oliver Maschmann, ZF Friedrichshafen AG
3:00 p.m.	2008-21-0042	Combining Automotive System and Function Models to support Code Generation and Early System Verification Dirk Stichling, Oliver Niggemann, Joachim Stroop, Dirk Fleischer, dSPACE GmbH
3:30 p.m.	2008-21-0043	Adaptation of a "Virtual Prototype" for Systems and Verification Engineering Development Chandrashekar MS, Manjunath BC, Everett R. Lumpkin, Frank J. Winters, Delphi Electronics and Safety
4:00 p.m.	2008-21-0044	PLM Promotes a Smart Outsourcing Model that Balances Cost with Intellectual Property Protection Robert Brincheck, Dassault Systèmes

Wednesday, October 22

Energy Stewardship: The Efficient Generation and Consumption of Electrical Energy in Automobiles

Session Code: CNVG9

Room O3-45

Session Time: 2:00 p.m.

Our industry has a responsibility to develop more energy efficient vehicles to address the dual concerns of global warming and depletion of energy resources. To achieve this, we must look beyond powertrain, and optimize the generation of electrical energy, and the utilization of electrical energy in all related automotive systems. This session will focus on opportunities to reduce energy consumption through electronic control throughout the automobile, without loss of performance as perceived by the end user.

Organizers - Alfons Graf, Infineon Technologies AG; Michael J. McCandlish, Elmos NA Inc.; Liu Qiao, Toyota Motor Engineering & Mfg NA Inc.; Anton Mindl, Erhard Musch, ELMOS Semiconductor AG

Chairpersons - Anton Mindl, Erhard Muesch, ELMOS Semiconductor AG

Time	Paper No.	Title
2:00 p.m.	2008-21-0045	A Stand-Alone Charging Management System to Improve Fuel Economy, Based on an Algorithm of Estimating Vehicle Motion Tadatoshi Asada, Syunichi Maeda, DENSO Corp.
2:30 p.m.	2008-21-0046	Improved Fuel Consumption through Steering Assist with Power on Demand Michael Wellenzohn, ThyssenKrupp Presta
3:00 p.m.	2008-21-0047	Contribution of the Air Conditioning System to Reduced Power Consumption in Cars Thomas E. J. Heckenberger, Peter Kroner, Marcus Weinbrenner, Ralf Manski, Andreas Kemle, Behr GmbH & Co. KG; John M. Tepas, Behr America, Inc.
3:30 p.m.	2008-21-0048	Low Energy Automotive Lighting Wolfgang Huhn, Audi AG
4:00 p.m.	2008-21-0049	Direct Conversion of Heat to Electricity Thomas A. Keim, Ivan Celanovic, Massachusetts Institute of Technology

Wednesday, October 22

Welcome and Introductions - Andreas Schell, Vice President Engineering Core, Electrical/Electronics, Chrysler

Session Code: CNVGW3

Room Riverview Ballroom

Session Time: 9:00 a.m.

Wednesday, October 22

Keynote - Karl-Thomas Neumann, Chairman of the Executive Board, Continental AG - "Drivers of the Continental Business Model"

Session Code: CNVGK3

Room Riverview Ballroom

Session Time: 9:15 a.m.

The business model of Continental AG has changed dramatically over its 137 years of history. From a rubber company we became a tire company and developed into a brake company, an electronics supplier to now finally become a full system supplier in the domains of powertrain, safety and information. The underlying driver for this transformation are the amount and challenges of innovation, the globalization of our industry and the consolidation among the OEM and TIER1 players. This keynote will report about this transformation including the latest acquisition of SiemensVDO and will highlight the major technology and market trends which will lead to further change in our current business model.

[Biography and photo](http://www.sae.org/events/convergence/keynote.htm)

Keynote Speakers - Karl-Thomas Neumann, Continental AG

Wednesday, October 22

The Changing Business Model - Are we seeing only the tip of the iceberg?

Session Code: CNVGP1

Room Riverview Ballroom

Session Time: 10:00 a.m.

The increasing application of advanced electronics hardware and software technologies to the systems and subsystems of the automobile has resulted in players from the electronics industry, ranging from system integrators and chip makers to contract manufacturers and holders of intellectual property, collaborating in non-traditional ways with traditional automotive OEMs and suppliers in the race to deliver the most competitive value proposition to our industry's ever more demanding consumers.

This panel is intended to explore the implications of this continuing trend on today's automotive industry supply chain relationships and predict the changes in the business model that will be necessary to successfully navigate through this period of profound change in our industry.

[Biographies and photos](http://www.sae.org/events/convergence/changing.htm)

Organizers - George R. Perry, Yazaki North America

Moderators - Thomas T. Stallkamp, Industrial Partner, Ripplewood Holdings, LLC and Principal of Collaborative Management LLC

Panelists - Saul J. Berman, Global & Americas Strategy & Change Leader, IBM Business; Ray Gage, Business Development Manager, Microsoft Corp.; Paul C. Kirsch, VP, HUGHES Telematics; Philip Martens, Senior Vice President, President Light Vehicle Systems, Arvin Meritor; Donald L. Runkle, Chairman, Eagle-Picher; John Thomas, General Manager & Senior, Senior Director Model S Program, Tesla Motors Inc.;