

Section Web Site: www.sae-arizona.org - Sign up for your newsletter on our website.

HIGHLIGHTS...

- Panel Discussion
- Message from the Chair
- Recap of January Meeting
- Coffee Talk
- SAE Foundation
- SOLS, January 2006

Dinner Presentation...

Panel Discussion: Turning Around the American Automobile Manufacturers

The big three American automobile manufacturers are facing a number of challenges at this time. Generally, market share has been lost and profits have been significantly below what they need to be to maintain the industry's historical role in the marketplace. Ford recently announced a major restructuring of North American operations including 30,000 layoffs and closure of a number of plants. GM also has lost money and market share and has announced similar reforms. Critics have attributed this to an inability to anticipate changes or change course in a changing market environment, failure to establish or reestablish a reputation for quality, and a focus on the interest of the shareholders rather than on the customers. Insiders have blamed legacy costs, costs of doing business in the United States, unanticipated changes in market conditions, and an uneven playing field in comparison with foreign competitors. Our next dinner meeting will address these and related issues.

The dinner meeting will feature a panel of former leaders of the American automobile industry including a former VP of Chrysler, a former director of engineering for Ford trucks, a GM plant manager, and possibly others. In addition, at least three of the confirmed panelists are former presidents of SAE International. The panelists will address questions including the causes of the recent losses that the American automobile manufacturers have experienced in both money and market share, reasons why other companies are more successful, and what the American automobile manufacturers need to do in order to become more successful. We will have a variety of questions for the panelists and we encourage you to bring your questions for them as well.

MODERATOR: Claude Verbal

Claude Verbal was the 1996 SAE President. He retired in 1998 after his 35 year career as a General Director of Operations for General Motors Service Parts Operations. From 1998-2003 he was the co-owner and C. O. O. of Wesley Industries.

PANELIST: Ward Atkinson

Ward Atkinson is the Chair of the SAE Interior Climate Control Technical Committee. He was the Manager of Air Conditioning for General Motors. In 2003 he accepted the EPA Stratospheric Ozone Protection Award on behalf of SAE.

PANELIST: Ed Mabley

Ed Mabley graduated from Rose Polytechnic Institute in 1947. Mabley joined the General Motors Transmissions Operations of Allied Division in 1948. He also joined the Truck Operations of Ford Motor Company in 1965. He has been a member of SAE since 1958: co-founding the SAE Truck and Bus Meeting in 1972, leading K thru 12 education programs including AWIM in 1989, founding SAE Brasil in 1991, and he was the SAE President in 1989.

PANELIST: John Leinonen

John Leinonen has a BS and MS in ME from the University of Michigan and is a registered Professional Engineer. He was Vice President-Automotive Business Practice, Failure Analysis Associates, Inc. after retiring as Executive Engineer of Production Vehicle Safety & Compliance at Ford Motor Co. He was also the 1995 SAE President.

PANELIST: Bernard Robertson

During his 38 year career, Bernard Robertson was elected an officer of Chrysler Corp. in 1992, appointed Senior Vice President coincident with the merger of Chrysler Corp. and Daimler-Benz AG in 1998, and was named Senior Vice President of Engineering Technologies and Regulatory Affairs in 2001. Upon his retirement in 2004, he founded BIRI, LLC.

Coffee Talk - NAU

NAU's student chapter has been competing in MiniBaja West competitions for the last three years and competed in the Aero Design competition last year. They will be participating in both competitions this year.

DATE	TIME	LOCATION	COST	With Dinner	Presentation Only
Feb 16	Social	- 6:00 pm	Crowne Plaza Hotel (Holiday Inn)	Members - \$20	\$10
	Dinner	- 6:30 pm	44th St. & Washington	Guests - \$25	\$10
	Presentation	- 7:30 pm	602-273-7778	Students - \$10	no charge
RSVP by 2:00 pm Monday February 13. Call Mindy Erway: 602-364-7122					

Message from the Chair

Our first meeting of the new year on January 19 was held in conjunction with the Section Officers Leadership Seminar (SOLS) at the new Radisson Fort McDowell Resort in Fountain Hills, Arizona. The meeting was very successful with 32 attendees in addition to the SOLS participants. Steve Arnold of Honeywell



Allan Watts, Section Chair.

told us about recent developments in turbocharging, particularly for Diesel engines. Special thanks go to Steve for his presentation. It was a pleasure to meet with the new leaders of SAE sections from all over the country and the world who were attending the SOLS program. John Lester also spoke about the history of the Arizona/Nevada Section and showed pictures of the early years. Special thanks also go to John for his presentation. We are fortunate to have two of the founding members of the section still active on the Governing Board, John Lester and Howard Daudet.

One benefit of Arizona's wonderful climate is that many people choose to retire in Arizona. As a result, we have a number of distinguished people in our section from the automobile industry who have retired in Arizona. This has given us the unique opportunity for a very promising presentation for our next SAE dinner meeting on February 16. For our next presentation, we will have a panel of former leaders in the American automobile industry who will speak about the problems that the American automobile manufacturers are having today. This promises to be a very interesting and very timely presentation.

Also at the February 16 dinner meeting, students from the Northern Arizona University (NAU) SAE student section will give a brief presentation on what they are doing and plan for the coming year. I look forward to seeing you at the February meeting.

Allan Watts
Section Chair

Recap of January Meeting by Dave Vasquez

As mentioned in the following, this month's dinner meeting was held in conjunction with the Section Officers Leadership Seminar (SOLS). Several SOLS participants spoke to me after our dinner meeting and wanted to thank our section for the great speakers - in particular, John Lester and Steve Arnold. Some comments I received were "very insightful" and "refreshing."

John Lester, former Arizona-Nevada section chair and founder, was the January coffee talk speaker. John dis-

cussed Arizona's history as a section - focusing on the sections formation, first few dinner meetings and milestones. In addition to his talk, John provided several photos from the sections earliest days. It was interesting to note the dinner meeting pic-



Steve Arnold (left) and Allan Watts (right)

tures of the past look very similar to our current meetings!

Steve Arnold, Director of Innovation and New Concepts at Honeywell, was January's main speaker. Steve discussed the differences in vehicle emissions standards between the US and Europe, the various methods and technologies used to reduce emissions from diesel engines and explained several turbocharging technologies.

Series and Series-Sequential turbochargers with variable nozzle turbine technology were proposed, but technical specifications, cost or packing factored into hindering the design. Ultimately, a single dual inlet turbocharger with a modified compressor wheel, provided for a lower cost, package effective and performance driven unit when compared to the multi-turbo systems. Steve's presentation contained several slides of data, animation and photos to support his findings.

Our thanks go out to John and Steve for their excellent presentations!

SAE Foundation by John Lester

"The most meaningful lessons are the ones we experience personally. Hands-on, up close, experiential learning brings concepts and theories to life in ways that last. Perhaps that is why most engineers have such vivid recollections of the first model they built or the first engine they tinkered with. It was through the early process of creating and experimenting that these young explorers first recognized the connections between ideas and actions. Between philosophy and practice. And between imagination and innovation."

These are the ideas behind the SAE Foundation's educational programs, A World In Motion (AWIM), and the Collegiate Design Series. The Foundation is charged with inspiring new generations of students through hands-on learning activities designed to stimulate curiosity and foster long-term interest in math and science. As SAE moves into its second century, the SAE Foundation has approved plans to expand these leading-edge outreach and educational programs by endorsing a capital and endowment fund campaign with a minimum goal of \$20 million. The program is entitled "Inspiring a New Generation: Forging a Second Century of

Innovation.”

In conjunction with the Board of Directors meeting in Fountain Hills this past month, several SAE leaders met to map out the campaign to support this and other related programs. Past President John Leinonen and his wife Joan hosted a brunch in their home in Scottsdale to bring these leaders together. Other past presidents in attendance included Don Ableson, Duane Tiede, Claude Verbal and Ted Robertson (his first day as a past president!).

The Foundation is seeking support to accomplish this exciting plan of action. Josh Rudin is our local AWIM Coordinator.

7th SAE Automotive Alternate Refrigerant Systems Symposium

*June 27 - 29, 2006
Resort Suites Hotel
Scottsdale, Arizona*

In response to concerns about the emissions of man-made greenhouse gases (GHG) into the atmosphere, the mobile air conditioning industry has been investigating ways to reduce GHG emissions. As part of this international activity, SAE has supported projects such as the Alternate Refrigerant Cooperative Research Program, and the Phoenix Alternate Refrigerant Symposiums. SAE is announcing the convening of this seventh industry 2006 meeting and is asking you and your company to participate.

Sponsorship opportunities for this Symposium exist to profile companies and enhance networking functions.

Even if you do not plan to make a presentation, please mark you calendar for this important event.

For more information, contact Colette Wright at (724) 772-8517; email: wright@sae.org

Northern Arizona University's Student Chapter Needs Your Support

NAU's student chapter (SAE@NAU) has been slowly growing since its resurrection in 2001. We have competed in the Mini Baja West competitions for the last three years and competed in the Aero Design competition last year. As we did in 2005, we will be competing in both competitions this year. NAU's



student chapter is requesting that anyone interested in sponsoring SAE@NAU contact us. Your donations will substantially enhance the education of the highly dedicated SAE student members. We truly appreciate your support. Contact: Morgan Knickrehm 928-380-2126 mlk39@nau.edu

SOLS, January 2006

by Dave Vasquez

Each year the Arizona section sends one board member to the Section Officers Leadership Seminar (SOLS). SOLS was



2006 SOLS Attendees

held in conjunction with the student Leadership Development Program at the Radisson Fort McDowell in Scottsdale, January 18-20th.

The conference covered a variety of topics to help section leaders fulfill their upcoming responsibilities, share best section practices and discuss the best way to engage student members. Some of the conference topics included "How to Plan Out an Entire Year's Worth of Section Programs," "A World In Motion (AWIM)" hands on activity, "How to Engage Your Student Chapters" and concluded with a roundtable discussion between the section leaders and student members.

The seminar also includes a mock section dinner meeting. This year, the Arizona-Nevada section offered to host its usual monthly meeting in its place. As many of you know, John Lester and Steve Arnold provided excellent presentations for the conference attendees.

The Board of Directors (BOD) enjoyed dinner with the conference attendees on Wednesday night, honoring those board members stepping down. Arizona's own Derek Logan, Vice Chair of Student Activities, was recognized for his dedication and hard work after completing his three year term on the BOD. The dinner also marked a conclusion to Ted Robertson's yearlong term as SAE president.

The seminar was a positive and worthwhile experience. I felt privileged to attend and represent the Arizona-Nevada section. Participating in the seminar reminded me that SAE is a volunteer organization, dedicated to advancing mobility engineering - from the local governing boards, to the national sections board and through the BOD. In particular, our own Arizona volunteers shine - offering their time helping coordinate and plan dinner meetings, participate in AWIM, create newsletters, participate at national level SAE activities and more.

So, You Wanna be a Racer?

Attention members under 35! The Arizona-Nevada section, in conjunction with the SoCal SAE section and the Bothwell Racing Team, is working on a program for those interested in learning more about racing. The hands-on two-day course is planned for March 18th and 19th in Phoenix for 4-8 people. Please visit our website for more information and RSVP details: <http://www.sae-arizona.org>

THE UNIVERSITY OF ARIZONA ANNOUNCES:

The 32nd Annual Applied Reliability Testing Institute provides coverage of how to implement and manage the Design-for-Reliability process through testing; how to implement an integrated Reliability & Maintainability Engineering management strategy; a practical approach to attain the high Reliability goals demanded nowadays; how to improve our worldwide competitive posture by creating more Reliable products through testing; solder joint durability and their useful life estimation; the determination of the time-to-failure distributions, failure rates, mean lives, reliabilities, and their confidence limits at desired high confidence levels; small-sample-size, high reliability, short-duration, efficient tests; nonparametric testing; test duration, sample size, and number of failures determination; HALT and HAST; burn-in testing, Qualification and Reliability Demonstration Testing; failure analysis technologies; product assurance techniques for becoming more competitive in today's markets; development cycle time reduction; productivity improvement techniques to achieve U. S. leadership in world markets; all types of goodness-of-fit test; determination of the confidence limits of the actual Reliability, Mean life and Failure Rate of all types of components, products and systems at high confidence levels; Customer Satisfaction Strategies to provide the tools required to design, test and manufacture products which are highly reliable with a minimum if any product recalls, easy to maintain, safe and less costly to operate, and sold at globally competitive prices; plus much more! Numerous practical applications of these methodologies are presented. This Institute will also prepare and help participants pass their ASQ Certified Reliability Engineer (CRE) Examination. Consultation Workshops, plus much more.

The 44th Annual Applied Reliability Engineering and Management Institute provides all engineers, and particularly Reliability Managers and Engineers, and Product Assurance Managers and Engineers in government and Industry a working knowledge of Reliability Engineering Theory and Practice; Mechanical Reliability Prediction; Reliability Testing and Demonstration; Accelerated Testing; Failure Analysis Techniques; Complete Industry Product Assurance Techniques; Maintainability; Customer Satisfaction, Strategies to provide the tools required to design, test and manufacture products which are highly reliable with minimum if any product recalls, easy to maintain, safe and less costly to operate, and sold at globally competitive prices, plus many more! Numerous practical applications of these methodologies are presented. This Institute will also prepare and help participants pass their ASQ Certified Reliability Engineer (CRE) Examination.

THE 32nd ANNUAL APPLIED RELIABILITY TESTING INSTITUTE
May 8-11, 2006

THE 44th ANNUAL APPLIED RELIABILITY ENGINEERING
AND MANAGEMENT INSTITUTE
November 13-16, 2006

Clarion Hotel, Tucson Airport
6801 S. Tucson Blvd.
Tucson, Arizona 85706
520-746-3932 or 800-526-0550

Registration Fee: \$1500 Proceedings Cost: \$50

For Details and Technical Information, please write to:
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Please pursue his website at: <http://www.u.arizona.edu/~dimitri>

Meeting Schedule

February	- American Automobile Manufacturers
March	- To Be Announced
April	- Hybrid by Toyota
May	- To Be Announced

Allan Watts Chair 602-364-7331	Dave Vasquez Vice Chair idave@asu.edu	Bill Gest Secretary bgest@esgng.com	John Lester Treasurer 480-733-6532	Robert Riley Newsletter Editor 623-872-8010
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