

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

HIGHLIGHTS...

- Automated Train System
- Coffee Talk
- Message from the Outgoing Chair
- Message from the Incoming Chair
- Recap of May Meeting
- NAU Receives Branch Status
- Maps for Meeting Location

Dinner Presentation...

Sky Harbor Automated Train System

by Jay DeWitt



Courtesy of Phoenix Sky Harbor International Airport

The Automated Train at Phoenix Sky Harbor International Airport will provide frequent, convenient and reliable service for airport passengers, visitors, and employees. It will be an integral part of the airport's transportation infrastructure, and an important link to the regional transportation system.

Trains will run twenty-four hours a day arriving at a station approximately every two minutes during peak periods, delivering most passengers to their destinations within five minutes after boarding. Baggage carts will be allowed on the trains, easing travel between terminals and parked or rented vehicles.

The Automated Train system will be developed in two stages. Stage 1 will carry passengers between the 44th St. and Washington Light Rail Transit, the East Economy Parking Lot and Terminal 4. Its estimated date of completion is 2013. Stage 2 will connect Terminal 4 to Terminal 3, a new terminal to be developed just west of Terminal 2 and the Rental Car Center. Development of Stage 2 is expected to begin in 2016 and be operational by 2020.

Sky Harbor Boulevard and the surrounding roadway system accommodate all traffic at the airport – it is the only way for passengers, employees, airport business and the public to access the airport terminals. The airport will continue to improve this roadway system, but it has finite capacity and a second mode of transportation will be necessary in the near future. Conservative growth projections suggest that Sky Harbor's roadway system will reach capacity in seven to ten years. Analysis has confirmed that the Automated Train is the most cost effective and efficient way to meet this demand,

keep pace with the remarkable growth of the metro Phoenix area, and maintain customer service levels.

Benefits:

- Convenient, easy-to-use transportation
- Relief from curbside congestion
- Minimized wait times
- Climate controlled vehicles
- Connection to Light Rail system
- Hassle-free travel
- Wheelchair, rolling luggage, and stroller friendly (no stairs)
- Accommodates future growth

Similar systems have been built in airports across the world, including Atlanta, Chicago, Dallas/Ft. Worth, Denver, Las Vegas, Houston, Minneapolis/St. Paul, Detroit, San Francisco, Miami, New York, Newark, Seattle and Orlando.

The anticipated project cost for Stage 1 is \$415 million and \$685 million for Stage 2.

For more information please contact Jay DeWitt, Automated Train Project Administrator, at 602.273.3340.

JAY DEWITT
AUTOMATED TRAIN PROJECT ADMINISTRATOR

Jay DeWitt is a Phoenix native and has worked for the City of Phoenix in six different departments over the past fifteen years. He currently works for the Aviation Department and is the project administrator for the interterminal automated train. Jay has Bachelor of Science and MBA degrees from Arizona State University. He and his wife Alice have three kids, Collin, Mary, and Jack.



DATE	TIME	LOCATION	COST With Dinner	Presentation Only	
Sept 20	Social	- 6:00 pm	Hilton Phoenix Airport	Members - \$22	\$10
	Dinner	- 6:30 pm	2435 S. 47th St, Phoenix-85034	Guests - \$27	\$10
	Presentation	- 7:30 pm	480.894.1600	Students - \$10	no charge
RSVP by 10:00am Tuesday Sept. 18			Call Sam Bethune: 602.364.7456		

Message from the Outgoing Chair

The year certainly has gone by quickly, but I've enjoyed every opportunity to work with the members. The Section has a talented group of individuals and I'm honored to be associated with them.

I'd like to thank the members for their attendance at the Section meetings. The Board works diligently every month to ensure you'll have a quality program available to attend. We hope to see more of you!

Next, I'd like to thank all of the speakers who were kind enough to share their time and talents with us at the dinner meetings. In particular, the Arizona student sections are always welcome to give us an update on their progress. We know our speakers are very busy and appreciate the time they contribute.

Lastly, I'd like to thank all of the Board members, official or unofficial, for their help in planning and coordinating events with speakers/the hotel/members and all the other miscellaneous items. In particular: Bill Gest and Josh Rudin for filling in when needed and challenging the Section to think forward to the future; John Lester for his ongoing support as treasurer and unending source of Section information; Bob Riley and his staff for delivering outstanding section publications on a monthly basis; Derek Logan for working with the students and representing our section at the national SAE events; Cathleen Gary for helping coordinate with the hotel/section to ensure smooth events; Allan Watts and Kevin Willson for helping with A/V needs and contributing in Section Board discussions; Max Rumbaugh Jr. and Howard Daudet for their unending support and advice; Hal Heule for providing ongoing support as a new board member and filling in for us on such short notice; Doug Culy for assisting in the yearly nominating committee process; Todd Zuercher for monitoring the newsletter mailing lists for accuracy and correctness; Brian Taylor and the staff at SAE headquarters for their ongoing encouragement and support.

I know the new Board members will do a terrific job at helping the section grow and continue to offer interesting dinner programs. I'm looking forward to this year's program lineup and I hope you'll be able join us for the dinner meetings.

Dave Vasquez, 2006/2007 Section Chair



Dave Vasquez
2006/2007 Chair

Message from the Incoming Chair

It is an honor to take on the leadership responsibility for the SAE Arizona/Nevada section. Having served under the past two Chairs, David Vasquez and Allan Watts, I have learned the amount of time each of these gentlemen have devoted to the SAE organization. What makes our organization successful is their continued support and active participation along with other past Chairs who currently serve on

the board. Thank you to all for your work.

The Board has been meeting every two weeks all during the summer. Thanks to Mike Kremer, our new secretary, and his "Go to Meetings" account, we now have the capability for Board members to attend by phone and also share in the meeting presentation on the web. Our typical attendance at the board meetings has averaged around ten per meeting this summer. The result is a very exciting list of programs for the coming year. The task of obtaining speakers has been taken on by both officers and Board members alike. Thank you to the entire Board and officer team for your efforts. The Section Board meets the Monday after each meeting at ESG Engineering, 2130 S. Industrial Park Ave, Tempe, AZ, if anyone would like to come and offer their input.

After serving for many years as our treasurer and other duties, John Lester has turned over the treasurer responsibilities to Larry Wilson. They will work together this year to complete a smooth transition.

Our first speaker will be Jay DeWitt who will share with us the plans for an automated train system to connect the light rail system with the airport terminals and the rent-a-car and parking lot. Please check out the calendar on our web site that lists all of the programs and dates for the year.

We will continue our monthly meetings at the Hilton by the Airport. Thank you, Cathleen Gary, for arranging the contract details. A special thanks goes out to Bob Riley for his work every month in publishing the monthly newsletter. Although there are many contributors, Bob and his granddaughter, Melissa Beckner, are the ones who make it into a finished product.

A final note, Bruce Blocksom has joined the Board to be our membership Chair. He will be calling various members each month to solicit their input and encourage their attendance at our monthly events. I would like to ask all members to reach out and invite others to the events. It is surprising how many people are only waiting for an initiation by someone to come.

Bill Gest, Section Chair



Bill Gest, Section Chair

Recap of May Meeting

by Allan Watts

Anthony Brazel, Climatology Professor and Acting Director of the School of Geographical Sciences at Arizona State University (ASU), spoke about the very interesting topic of global warming at the Arizona/Nevada Section SAE meeting on May 17, 2007.

Topics of discussion included the mechanism of global warming, science and evidence regarding the significance of the problem, the probability of potential results to

the environment, potential effects on the transportation industry, and whether current proposals like the Kyoto Protocol are adequate or helpful. Professor Brazel drew upon his extensive experience and research in the area of climate change, both on a local and global scale, to provide a very informative presentation on such a hot topic. Although there are many processes and confounding variables in operation, in recent years it has gained widespread acceptance that the earth is warming. Human activities, including the burning of fossil fuels in motor vehicles, is likely to be causing the warming.

The earth's atmosphere tends to warm the earth by allowing higher-frequency sunlight to enter. It does this while discouraging lower frequency heat, radiated by the earth itself, from escaping. This is called the greenhouse effect. Certain substances called greenhouse gasses (such as carbon dioxide and methane) tend to increase the greenhouse effect, and such substances are released as a result of some industrial processes, like the burning of fossil fuels. Burning fossil fuels releases carbon into the atmosphere, that otherwise would have been trapped below the earth's surface. Substances that have already been released into the atmosphere will continue to cause temperatures to increase. The rate at which carbon dioxide and other substances are released also contributes to global warming. It will have an increasing dramatic effect from year to year as populations across the globe develop fossil fuel consumption habits more closely resembling those of western countries like the United States.

In addition, melting of polar ice caps has been observed. It is feared that the reduction in ice will reduce the amount of sunlight that is reflected into space from the polar regions -- causing additional heating of the Earth's surface. Although the consequences of climate change are not necessarily easy to predict, concerns exist that the melting ice located on land will cause increases in sea levels resulting in the loss of low-lying land surfaces. A few things the climate change might partake in are draughts, increases in extreme weather such as hurricanes, reduced crop yields, species extinctions, and changes in oceanic circulation patterns. As a result of fears over the potential effects of global warming, efforts have been undertaken to reduce the consumption of fossil fuels, among other changes in human activity.

The Kyoto protocol was negotiated between many countries in the world to reduce greenhouse gas emissions. However, it did not place limits on third world countries that contribute greatly to the emission of greenhouse gasses. The United States decided, after the negotiation of the agreement, not to sign it. Even though the United States as a whole did not sign it, many states and cities within the United States are taking action to reduce the emissions of greenhouse gasses.

Most of the transportation systems used today burn fossil fuels as a source of energy. This includes automobiles, aircraft, ships, farming equipment, construction equipment, mining equipment, and railroads. Electricity supplied to many

other forms of transportation such as people movers, electric vehicles, electric trains, subways, and street cars are produced in a large part by coal-fired power plants. Thus, action taken to reduce fossil fuel consumption or greenhouse gas emissions is likely to have profound effects on the transportation systems that are utilized today. These effects may have negative consequences for many companies. It could also provide opportunities for companies that are in a position to provide transportation solutions that reduce or eliminate the consumption of fossil fuels, while competing favorably with other alternatives.

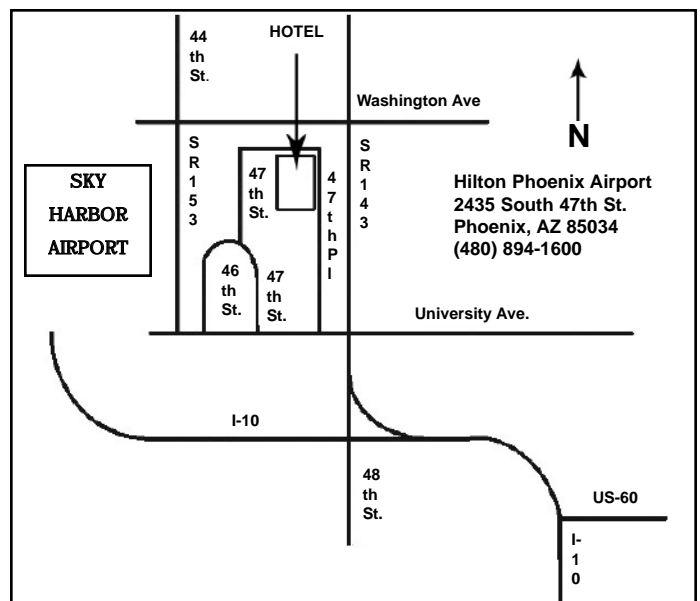
Coffee Talk - DESERT FUEL

Bryan McCoy, from Desert Fuel of Mesa, is our Coffee Talk speaker for the September meeting. His organization is an official contender of the Automotive X-Prize competition. Their goal is to produce a cost effective vehicle that reduces the impact of daily impact of driving on the environment that can be purchased by a large majority of the population. More information at: <http://www.desertfuel.org/index.html>

NAU Receives Branch Status

The Northern Arizona University student chapter of SAE has received notification, from SAE International, this summer that their chapter has met the requirements for Branch status. This was achieved by their student chapter maintaining a membership of at least 25 members for the past three years. NAU has been steadily increasing both membership enrollment and intercollegiate participation in SAE events. This results in NAU being eligible for the Branch Allocation Program which provides \$5/paid student member. Congratulations to John Tester, as advisor, and to the entire NAU student chapter.

**** Meeting Location ****



THE UNIVERSITY OF ARIZONA ANNOUNCES:

The 45th Reliability Engineering and Management Institute provides all engineers, particularly Reliability Managers and Engineers, Product Assurance Managers and Engineers in government and Industry, with a working knowledge of Reliability Engineering Theory and Practice, Mechanical Reliability Prediction, Reliability Testing and Demonstration, and more. Dr. Dimitri B. Kececioglu and 10 speakers from 15 sponsoring industries will take part in expertly covering the subject matter of this Institute. For more information, please the contact information below.

The 34th Annual Reliability Testing Institute provides coverage of how to implement and manage the Design-for-Reliability process through testing, to implement an integrated Reliability & Maintainability Engineering management strategy, learn a practical approach to attain the high Reliability goals demanded nowadays, to improve our worldwide competitive posture by creating more Reliable products through thorough testing, to determine the useful life of our products, and more. Dr. Dimitri B. Kececioglu and 10 speakers from 10 sponsoring industries will take part in expertly covering the subject matter of this Institute. For more information, please the contact information below.

THE 45th ANNUAL RELIABILITY ENGINEERING
AND MANAGEMENT INSTITUTE
November 12-15, 2007

THE 34th ANNUAL APPLIED RELIABILITY TESTING INSTITUTE
May 5-8, 2008

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:
Dr. Dimitri B. Kececioglu, P.E.
Professor of Aerospace and Mechanical Engineering
The University of Arizona
1130 N. Mountain Avenue, Bldg. 119, Room N517
P.O. Box 210119, Tucson, AZ 85721-0119
You can also Call: 520-621-6120, Fax: 520-621-8191,
Or Email: dimitri@u.arizona.edu
Please see his website at: <http://www.u.arizona.edu/~dimitri>



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ARIZONA-NEVADA SECTION: Meeting Schedule

- Sept 20 - Automated Train System
- Oct 18 - Spirit Aero Boeing 787
- Nov 8 - Evolutionary Trends in Powertrain Technology

Bill Gest
Chair
bgest@esgeng.com

Joshua Rudin
Vice Chair
602-369-6487

Mike Kremer
Secretary
MKremer@esgeng.com

Larry Wilson
Treasurer
wilson.lawrence@orbital.com

Robert Riley
Newsletter Editor
623-872-8010



Society of Automotive Engineers
Arizona Section
69 West Wilshire Drive
Phoenix, AZ 85003
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