

ENGINEERS CLUB OF THE WEST VALLEY

FEBRUARY 2009 NEWSLETTER

www.engineersaz.com

The Engineers Club is a social organization which meets regularly for lunch with a speaker on a technical topic. Spouses are invited and many attend regularly. Short field trips are occasionally scheduled. Membership is open to anyone who has worked in or had close ties to the engineering or scientific fields. Meetings are held at 11:30am on the first Friday of each month, October through June, at Briarwood Country Club, 135th and Meeker in Sun City West, Arizona.

Visitors are always welcome -- Reservations are required -- Just call (623)546-9112 to let us know you are coming.

FEBRUARY 6 PROGRAM



New Automotive Developments

Max E. Rumbaugh, Jr.

Max Rumbaugh is the Executive Vice President Emeritus of the Society of Automotive Engineers, International (SAE Intl). He is currently a consultant with the Mississippi State University's Center For Advanced Vehicle Systems.

He graduated from the US Military Academy at West Point, NY. After service in the Army as an Artillery rocket platoon leader, he attended Purdue University earning Masters degrees in both Engineering and in Business.

Mr. Rumbaugh has given presentations to audiences worldwide, including the Engineers Club on at least two previous occasions.

Max will speak about the New Technologies and Developments in the Automotive Industry.

NOTES FROM...

President Fred Scheske



THE AUTOMOBILE, AN ENGINEERING FEAT OF THE 20TH CENTURY

Automobiles! They are modern man's mobile living room with comfortable seats, air conditioning, and marvelous sound systems. But, cars weren't always so sophisticated. All of us have witnessed tremendous changes in automobiles in our lifetime. Henry Ford's Model T shaped the assembly line which fostered the auto industry. Brutal competition between automakers found no less than 43 companies in the United States making cars in 1926! General Motors became the fastest growing company, offering cars with doors and windows to eclipse Ford. GM was also the first to offer several styles and price ranges. Packard, on the other hand, offered exclusivity in its car. Fine cars had to be well engineered and Packard, among other quality cars, met that standard.

Excellence in design, styling and manufacturing were defining factors in engineering automobiles. GM touted a Fischer Body. Chrysler proclaimed its superior engineering. Ford continued building its cars for "all Americans." Hudson produced the first car you "stepped down" to get within. Automakers grew into small empires, buying huge amounts of steel, rubber, raw materials, and by manufacturing components such as spark plugs, batteries, and electrical parts in corporate subsidiaries.

In the mid 50s the Volkswagen became a worldwide sensation. Why? Because it marketed simple design, reliability, economy and low price. The Bug eventually eclipsed the Model T's record of 15 million cars sold. Japan entered the world marketing of cars in the 1980s, producing fuel efficient engines and establishing advanced manufacturing techniques under the leadership of Dr. W. Edward Deming, the father of quality management, using Statistical Process Control and "Just-In-Time" assembly operations.

The automobile remains an engineering work in progress due to government regulations and societal pressures. Onboard computers maximize automobile efficiency. New materials, such as improved steel, plastics, aluminum and carbon composites save weight and add structural strength. Engineers continue work designing power systems to replace combustion engines and research longer life batteries for electric motors.

Automobile manufacturing, thanks to engineering, has ongoing modernization that would astound Henry Ford, using computers to design and test cars and robots to perform assembly work with speed, precision and flexibility that is unmatched by humans. A national magazine in 1923 stated that the automobile had "outrun the dreamers, confounded the prophets, and amazed the world." Engineers can testify that is certainly true!

MARCH 6 PROGRAM

SRP Renewable Energy

SRP is two entities: the Salt River Project Agricultural Improvement and Power District, a political subdivision of the state of Arizona; and the Salt River Valley Water Users' Association, a private corporation.

The District operates or participates in 11 major power plants and numerous generating stations that provides electricity to retail customers in the Phoenix area. The Association delivers nearly 1 million acre-feet of water annually through the canal system to central Arizona

Renewable resources are clean or "green" energy sources that have a much lower environmental impact than conventional energy sources. Renewable resources are attractive because they are replenished naturally -- which means they will never run out. These include a mix of wind, geothermal, large hydro and low-impact hydro, landfill gas and solar.

SRP's total current renewable capacity is 493 megawatts.

April 10, 2009

Presentation by

The Banner Research Institute

NEWSLETTER & WEBSITE

The newsletter is published at www.engineersaz.com about two weeks before each meeting. Questions or suggestions should be directed to Bill Harrison at bharrison@cox.net or (623)546-4943.

WELCOME NEW MEMBERS

Tom Anderson and Bob Wolcott

Club membership is 140

2009 OFFICERS

| | | |
|----------------|----------------|----------|
| President | Fred Scheske | 556-2892 |
| Vice President | Larry Pensiero | 546-1703 |
| Secretary | Jodie Lawrosky | 238-5256 |
| Treasurer | Don Block | 546-0557 |

COMMITTEE CHAIRPERSONS

| | | |
|-----------------|----------------------|----------|
| Programs | Larry Pensiero | 546-1703 |
| Membership | Bob Latvalla | 546-7801 |
| Membership | Bill Lee | 977-1818 |
| Reservations | Gene Comstock | 546-9112 |
| Luncheons | Hal Clemett | 546-4941 |
| Scholarship | Geraldine Montag | 546-7963 |
| Scholarship | Fred Berkenkamp | 214-7757 |
| Scholarship | Rutheloise Borchardt | 933-2307 |
| Reception | Bob Kessler | 872-1994 |
| Newsletter | Bill Harrison | 546-4943 |
| Web Site | Jim & Pat Ardis | 362-1013 |
| Publicity | Keith Morrow | 546-3080 |
| Member at Large | Dave Wittchen | 544-8945 |
| Field Trips | Dave Whitehouse | 544-0942 |
| Past President | Keith Morrow | 546-3080 |

TREASURER'S REPORT 12-31-2008

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|---------------------------|------------|
| General Fund Balance: | \$4,222.36 |
| Scholarship Fund Balance: | \$2,380.23 |

LUNCHEON MENUS

February 6: Apple wood Smoked Pork Chop with Pepper Hash, Thyme Scented Green Beans, Salad, Rolls, Beverages, Peppermint Ice Cream (Entrée Option: Fruit Plate)

March 6: Molasses Grilled Chicken. Mashed Sweet Potato, Chef's Vegetable Medley, Salad, Rolls, Beverages, , Peppermint Ice Cream (Entrée Option: Fruit Plate)

RESERVATION POLICY

The cost of the monthly luncheon is \$16.50 per person.
 The reservation deadline is 6PM Monday before the meeting.
 Late reservations cannot be guaranteed the regular meal.
 Call Gene Comstock if you cannot keep your reservation.
 A fee of \$10 will be charged for "no-shows."
 Please have cash or make out your check in advance.
RESERVATIONS Gene Comstock (623)546-9112

Observations and report on the recent tour of the Phoenix Postal Distribution Center

The Phoenix Postal Distribution Center is one of the largest of its kind in the country and it is highly automated. The mail is sorted so as to contain only letter mail. Packages and even large envelopes are sent to a separate center to be sorted and distributed. Mail comes in to the Phoenix center from all over the state and is then sent back out to locations throughout the state for delivery. The mail for delivery in many areas of the Phoenix area is sorted and bundled by the zip code plus 4 plus 2. The 11 digit zip code actually puts the pieces of mail in proper groups and in the correct order for the individual mail person to use without requiring any further sorting.

The process begins with the flat mail envelopes dumped on to conveyors in a complete disarray. The letter envelopes then go through several operations with the end result that all are arranged such that they are now on edge and they face the same direction and with the stamp at the top. The series of manipulations of the envelopes to accomplish this orientation is completely automatic and at an unbelievable speed. The letters then proceed through the scanners that read the addresses and sort the mail by the zip code. Mail to other states is separated in the sorting process and is forwarded to locations similar to the Phoenix operation.

One item of interest is the precaution taken to protect the employees against a letter that may contain Anthrax. The conveyors where the initial sorting takes place are contained in enclosures so that the air inside these enclosures is controlled and monitored. If any trace of Anthrax is detected, the line is immediately stopped and special procedures are then initiated. The special enclosures and associated equipment was a very expensive addition as well as the costs associated with training and maintaining that equipment. This may well be a significant factor in the increase in postage rates. Another point of interest is that the total volume of mail has reduced significantly due to the advent of email.

$111,111,111 \times 111,111,111 = 12,345,678,987,654,321$



Michael Bassoff, President of the T-Gen Foundation describing the Nature and benefits of Translational Genomics as a medical tool.



Past President Keith Morrow received a plaque recognizing his service to the club from incoming President Fred Scheske.