



Fort Wayne Section News

VOLUME 02, ISSUE 5

January 2004

JANUARY MEETING ANNOUNCEMENT

- PROGRAM:** **Uncovering the Secrets of the Wright Brothers**
 Robert L. Ash, Interim Vice President for Research
 Old Dominion University
- LOCATION:** **Goegleins**
 7311 Maysville Road
 Fort Wayne
- DATE / TIME:** **Wed., January 14, 2004** 5:30 pm Social
 6:00 pm Dinner
 6:45 pm Program
- COST:** \$16.00 SAE Members and Retirees
 \$20.00 Non-member/or at the door
 \$10.00 Students
- MENU:** Tossed Salad, Roasted Turkey Breast, Bread Dressing, Whipped Potatoes &
 Gravy, Green Beans with Almonds, Dinner Rolls, Texas Sheet Cake
- RESERVATIONS:** **ADVANCE RESERVATIONS REQUESTED BY January 8th.** Company
reps are listed on the last page. On-line reservations may now be made at the Section web
site.
- Visit the Section website at <http://www.saesections.org/fortwayne/>

About the Program and Speaker ...

One hundred years ago, Wilbur and Orville Wright became convinced that they had the knowledge and where-with-all needed to build and fly the world's first powered and controlled flying machine. Their three glider campaigns in Kitty Hawk, NC, combined with their theoretical studies and wind tunnel testing in Dayton, OH, left them with a reasonably efficient aerodynamic and structural configuration incorporating an effective three-dimensional control system. In addition, they had acquired considerable skill as pilots, and gained the confidence needed to embolden them to attempt their ultimate goal. The only remaining important challenges were to obtain an engine with good power-to-weight ratio and to find propellers that were efficient in converting shaft power to thrust. Neither of their remaining problems was as simple to overcome as they had assumed.

By early 1903, they had built and tested their own four-cylinder (4 1/8 in. bore and 4 in. stroke-check) engine and found that it produced almost 16 horsepower immediately after a cold start, decreasing to a near steady-state output of 12 horsepower. They assumed that the mystery of propeller design had been solved by the shipbuilding industry, since screw propellers had been used on steam-powered ships for more than 50 years. They soon discovered that a technological breakthrough in propeller design was required if they were to achieve powered flight with their existing airplane structures and power plant.

This talk will discuss the pioneering accomplishments of Wilbur and Orville Wright in designing the world's first powered and controlled flying machine. Their design of efficient airplane propellers has been largely overlooked. We will discuss how The Wright Experience has carefully recreated the original propeller designs and how the wind tunnel testing program at Old Dominion University is beginning to document the extraordinary achievements of Wilbur and Orville Wright in the design and construction of efficient airplane propellers.



Robert L. Ash is the Interim Vice President for Research, Eminent Professor and Scholar, and Professor of Aerospace Engineering at Old Dominion University. Ash also served at Old Dominion University as Acting Dean of Engineering and Chairman of the Mechanical Engineering and Mechanics Department. He was also a Visiting Distinguished Research Engineer at NASA Langley Research Center.

Ash's professional society memberships and activities include the National Research Council, Space Studies Board, Committee on Microgravity Research; AIAA, Associate Fellow, Atmospheric Environment Technical Committee and Thermophysics Technical Committee; and Board of Advisors, NASA Center for the Utilization of Local Plenary Resources, University of Arizona.

His awards and honors include NASA Group Achievement Awards; Virginia Society of Professional Engineers, Pletta Medal as Outstanding Engineering Faculty Member in Virginia; Old Dominion University, Outstanding Teaching Awards, College of Engineering; Professional Engineer of the Year in Tidewater, Virginia; Who's Who in Engineering, Phi Kappa Phi, Pi Tau Sigma, Sigma Tau, Sigma Xi, Tau Beta Pi.

Ash earned his bachelor's degree at Kansas State University and his master's and doctorate at Tulane University.

THE BRILLIANCE OF COMMON SENSE.™

INTERNATIONAL TRUCK AND
ENGINE CORPORATION

www.internationaldelivers.com
Truck Development and Technology Center
Fort Wayne, In

PANA-PACIFIC

OEM DIVISION

YOUR OEM ENTERTAINMENT LEADER

- Truck Audio Systems
- Cobra CB's
- LCD TV's
- Refrigerators (12 Volt)
- New XM & Sirius Satellite Radio

Contact Jim Roussey
OEM Sales Manager/Engineer
Pana-Pacific Corp.
260.486.8500

TRW Commercial Steering Systems is the world leader in the design, development and integration of commercial vehicle steering systems. Its technologically advanced products, superior service and global organization assure customers around the world of quality and dependability in commercial steering systems.



TRW

Roadranger
MORE TIME ON THE ROAD

EATON



Our original worry-free clutch -- the **Eaton® Fuller® Solo** -- is just a part of our comprehensive clutch product line for the Class 6 through Class 8 truck market and for genuine aftermarket parts.

To learn more, contact the Roadranger Call Center at (800) 826-4357 (826-HELP).

<http://www.roadranger.com>

Company Representatives

Please make meeting reservations and dinner payments with your company representative (or online at www.saesections.org/fortwayne/):

Rich Taylor	Dana Corp., Churubusco
Dan Gochenour	Eaton Clutch, Auburn
Steve Burman	Dana Corp., Spicer Axle
Dan Grohnke	International Truck
David Gibson	Cooper Standard
Bongsu Kang	IPFW
Ramiro Bravo	Tri-State University
Dave Aschliman	Indiana Institute of Technology
Jim Roussey	All Others (P) 260.486.8500



SAE Fort Wayne Section
c/o Marty Blessing
International Truck and Engine Corporation
2911 Meyer Road Mail Bin 007
PO Box 1109
Fort Wayne, IN 46801-1109
marty.blessing@nav-international.com

ADDRESS CORRECTION REQUESTED