



# Newsletter

Volume 34, Number 1, September 2003

## The Birth of Aviation Presentation

*Speaker: Dennis H. Parks, Director of Collections, Senior Curator at Museum of Flight*



Dennis Parks will discuss the major new exhibit at The Museum of Flight called *The Birth of Aviation*. This new, 5,000 sq. ft. exhibit is a celebration of the Centennial of Flight which is open till February 1, 2004. It offers the most comprehensive view of the Wright Brothers anywhere.

The exhibit puts the Wright Brothers in context of their cultural and technical era, examines their process of development for the Wright Flyer and examines how they developed their new invention into an industry. The exhibit features the first public display of the long-lost corporate records of the Wright Company – the crown jewel of the Museum's archival collection.

**Dennis H. Parks Director of Collections/Senior Curator at The Museum of Flight is responsible for The Museum's collections. He has written more than 160 articles on aviation history, collections and research as a feature writer for the EAA publications Vintage Airplane and Sport Aviation. Parks has twenty years of museum experience, ten as the Library/Archives Director at the Experimental Aircraft Association (EAA) Aviation Foundation at Oshkosh, Wisconsin. Parks received his Master's degree in Library Science from Indiana University. He earned his Bachelor's degree in History from Purdue University, where he became an Assistant Professor of Library Science and also served as the Director of the Aviation Technology Library and Reference Librarian at the Engineering Library.**

## Joint AIAA/SFTE Lecture - Dinner Meeting

Date: **Wednesday September 24, 2003**  
Place: Old Spaghetti Factory 2801 Elliott Ave, Seattle, WA 98121  
Time: 6:00 PM Social, No-Host Bar  
6:30 PM Dinner – lasagna or tortellini  
7:00 PM Program – **The Birth of Aviation**

*Please make reservations by September 19th  
A reservation is a commitment to pay!*

Dinner Reservations: Call anytime (425) 294-2736 or send email to [david.j.paisley@boeing.com](mailto:david.j.paisley@boeing.com) or [paul.l.clement@boeing.com](mailto:paul.l.clement@boeing.com)

**Entrée choices are lasagna or tortellini. Please specify choice when reserving.**

Dinner Price:

**\$15** AIAA/SFTE Members and Guests

**\$18** Non-Members

**\$5** Students

Program Only: **\$5** (Free for persons 17 and under)

## The Best of Oshkosh

Billy Roeseler

Dan Drapp and Jack Noble attended the greatest airshow last month. Jack liked the DYNAMIC WT9 homebuilt ([www.czechsportplanes.com](http://www.czechsportplanes.com)). Dan liked the VTOL described in this article.

The goal here is to create an affordable system for getting from Paine Field to Hood River for no more cost or risk than a small motor home. The cost for the 500 miles roundtrip was around \$500, mostly in the spark plug/exhaust manifold problem on the 460 Ford chassis on which the motor home resides. We burned 80 gal of fuel.

AMV Aircraft –VTOL Technology may be an alternative air vehicle for the same trip, but faster. That's world's first practical, single-ducted short or vertical takeoff and landing aircraft.



How it works. For vertical takeoff or landing, the propeller plane of rotation is parallel to the ground, and the rotor torque is reacted by vanes below the rotor. After takeoff, the whole craft gradually tilts forward while gaining horizontal speed. When the propeller plane of rotation reaches approximately 20 degrees, the front lifting surface, the wing, and the tail surface are supplying most of the lift.

### Performance



Rate of climb: 500 feet per minute  
Cruise speed, 60% power – 250 mph    Max speed 280 mph  
Range 1,200 nautical miles    Service Ceiling 25,000 feet

### Specifications

Length 20 feet  
Wing Span 20 feet  
Empty Weight 900 pounds  
Gross Weight – 1,800 pounds  
Fuel Capacity 50 US Gallons  
Useful Load 900 pounds  
Payload 600 pounds  
Engines Mazda Rotary Turbo Charged; approximately 450 shp



The fan axis is vertical at takeoff and tilted fwd during cruise at 250 mph. The wing provides 50% of the lift at 200 mph and 80% of the lift at 250 mph.

The trick would be to get the cost of ownership down below \$200/hr, as that will eat up most of the \$500 trip budget. If we could buy the aircraft for \$100K and it would last 1000 hr, we may be able to do it. Most of these type aircraft don't even last 100 hrs. But by using mostly fiberglass, we may be able to extend the fatigue life of the hardest working parts to 10,000 hr, giving us a reliable service life of 1000 hr.



## PNW Aerospace Timeline

### Dinner Meeting and Lecture

#### September Dinner Meeting

Topic: The Birth of Aviation Presentation  
Date/Time: Wednesday, September 24<sup>th</sup> at 6:00 p.m.  
Location: The Old Spaghetti Factory, 2801 Elliott Ave, Seattle

#### Museum of Flight Pathfinders Event

Topic *See announcement below*  
Date/Time Saturday, October 11, 2003; 5:30 p.m. to 10:00 p.m.  
Additional call 206-768-7162 or  
information mpollak@museumofflight.org

### 22ND ANNUAL PATHFINDER AWARDS GALA

Time: 5:30 p.m. to 10:00 p.m., Saturday, October 11, 2003

The Pathfinder Award honors the contributions of Northwest pioneers in aviation and aerospace. Join The Museum of Flight in lauding the 2003 honorees C. Donald Bateman and Louis B. Gratzler. Pathfinder Awards are given for achievement in any of five different categories of activity: flying, engineering, manufacturing, operations or education. This year, the Museum will recognize the 64th and 65th recipients of the prestigious award. Black-tie optional. For reservations or more information, please call 206-768-7162 or mpollak@museumofflight.org.

Tickets start at \$65 per person.

### Conference Volunteers Sought

June 28 - July 1 2004 Fluids Technical Conference  
Portland, Oregon

Seeking volunteers to help plan for a successful technical conference in Portland in 2004.

This conference is to include:

- Aerodynamic Measurements and Ground Testing
- Fluid Dynamics
- Flow Control
- Plasmadynamics and Lasers
- Thermophysics

If you wish to get involved with planning for this conference, please contact:

Bob Robins (bob@nwra.com)

NorthWest Research Associates, Inc.

425-644-9660 X305

### Retired Members Brunch

#### Third Saturday every other month

Speaker: Ed Tinoco and Doug Ball; topic "Use of CFD in Modern Day Aircraft Design"  
Date/Time: September 20<sup>th</sup>, 9:00AM  
Location: Museum of Flight, Seattle  
Contact: Tom Holgate 253-838-0333

### September Chairman's Column

Welcome to a new year of AIAA activities! As you may know, our meeting season runs from September through June. Each of those months, we will hold a joint dinner meeting with the local Society of Flight Test Engineers branch and other societies as are fitting. We also have some special events planned. To commemorate the 100<sup>th</sup> anniversary of powered flight, we are sponsoring a special aviation history program to be aired on public TV later this year. We are also helping underwrite student presentations in a joint UW/MIT program. We plan to re-visit the Me262 project at Paine Field in Everett now that they've actually flown their first airplane.

I hope you're finding your own special ways to celebrate this centennial year of powered flight. I've been trying to attend as many airshows and fly as much as I can before weather sets in. Some of us live in areas with shaky aerospace employment, so that does tarnish the celebration a bit. If you are in danger of losing your job, AIAA can be a source of contacts for future employment. Come to a dinner meeting and meet prospective employers and co-workers. Or log onto [www.aiaa.org](http://www.aiaa.org) to learn about national services for unemployed members.

As always, the Pacific Northwest AIAA council is open to hearing your feedback regarding the local section and ideas you may have for future events. Officer contact information is on the back page.

Vera Martinovich

Pacific Northwest Section Chairman

Section website: [http://www.geocities.com/aiaa\\_2000/index.html](http://www.geocities.com/aiaa_2000/index.html)  
 National website: <http://www.aiaa.org>

Please submit newsletter materials to Joe Dortwegt by the 20th of September for the October Newsletter.

<b>Outstanding Section Awards</b>	<b>Membership Award</b>
1972-1973	1997-1998
1977-1978	<b>Young Member</b>
1978-1979	<b>Activity Awards</b>
1991-1992	1990-1991
1993-1994	1991-1992
1994-1995	1994-1995
	1995-1996
<b>Section Special Event Awards</b>	<b>Career Enhancement Award</b>
1976-1977	1997-1998
1977-1987	<b>Newsletter Awards</b>
1978-1979	1994-1995
1982-1983	1995-1996
1987-1988	1996-1997

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**Address Corrections**

Send to: **AIAA**  
**1801 Alexander Bell Dr.**  
**Reston, VA 22091**

Now make corrections on-line at  
<http://www.aiaa.org>  
 (Join/Renew/Update). Membership ID needed

## Section Officers and Directors

Position	Name	Address (Mail stop if Boeing*)	Phone	Email address
<b>Council</b>				
Chairman	Vera Martinovich	02-XJ	425-266-8664	vera.a.martinovich@boeing.com
Vice-Chairman	Ben Sarao	1432 242 <sup>nd</sup> Place SE, Sammamish, WA. 98075	206-768-7166	bmsarao@hotmail.com
Secretary	Joe Dortwegt	02-WF	425-342-2300	joseph.dortwegt@boeing.com
Treasurer	Paul Moorehead	67-65	425-237-5176	paul.j.moorehead@boeing.com
Advisory Council	William Gjertson	8J-72	253-773-3090	william.g.gjertson@boeing.com
Advisory Council	Billy Roeseler	02-KW	425-266-9270	wm.g.roeseler@boeing.com
Advisory Council	Martin Gibbins	4E-11	206-655-2727	martin.n.gibbins@boeing.com
Advisory Council	Scott Eberhardt	P.O. Box 352400, UW, Seattle, WA 98195	206-543-6508	scott@aa.washington.edu
Past Chairman	Laura Kistler	02-KW	425-294-8520	laura.s.kistler@boeing.com
<b>Elected, non-voting</b>				
Vice-Chairman-Elect	Dave Paisley	02-WF	425-294-2736	david.j.paisley@boeing.com
Secretary-Elect	Jon Lee	5108 71st Way NE, Olympia, WA 98516	206/934-9782	drwatson@u.washington.edu
Treasurer-Elect	Eric Lund	Apt 307 601 S Washington Seattle WA 98104	206/342-9942	elund@andrews-space.com
<b>Appointed</b>				
Webmaster	Jane Kuta	8A-94	253-773-5759	jane.f.kuta@boeing.com
Honors & Awards	Scott Eberhardt	P.O. Box 352400, UW, Seattle, WA 98195	206-543-6508	scott@aa.washington.edu
Retired Members	Tom Holgate	2704 SW 314th, Federal Way, WA 98023-7842	253-838-0333	holgatz@aol.com
Newsletter	Open			
Nominations	Laura Kistler	02-KW	425-294-8520	laura.s.kistler@boeing.com
Evolution Of Flight	Ben Sarao	1432 242 <sup>nd</sup> Place SE, Sammamish, WA. 98075	206-768-7166	bmsarao@hotmail.com
Museum of Flight Liaison	Open			
Pre-College Outreach	Open			
Public Policy	Karl D'Ambrosio	5026 18 <sup>th</sup> Avenue NE, Seattle, WA 98105	253-395-3710	karld@emfcowa.com
Young Professionals	Emmanuel Domingo	PO Box 591, Bothell, WA 98041	425-487-2888	edomingo@in-tec.com

\* All Boeing people have the address of P.O. Box 3707, Mail Code xx-xx, Seattle, WA 98124-2207



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