



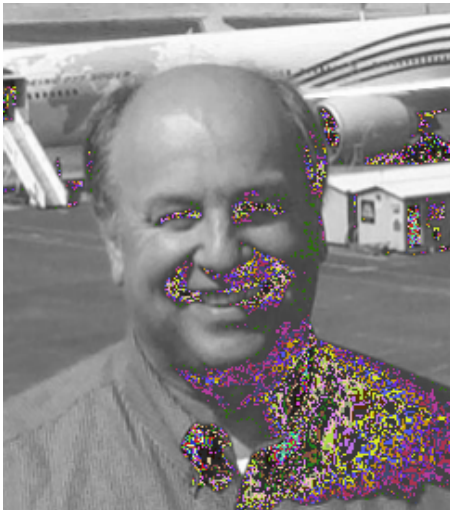
Newsletter

Volume 34, Number 7, March 2004

“Flight Testing of Boeing Commercial Jet Transports”

*Speaker: Jerry Zanatta, Director of Flight Test Engineering and Test Programs
Boeing Commercial Airplane Group*

Someone once said that flight testing is like sausage making. It's best for the public not to know what really happens and to just enjoy the end product. But for the inquiring minds in AIAA, Jerry will give us a behind the scenes look at the things you won't encounter in "the Friendly Skies." You will see videos of airplanes being tested to extremes that would make the PR and Marketing folks cringe. Jerry draws on the past four decades of flight testing at Boeing for his presentation.



As leader of Flight Test Engineering, Jerry represents the test discipline in Boeing leadership activities. Jerry has been in Flight Test most of his Boeing career, starting as a test engineer on the 707-300 certification program and continued working on

development and certification programs for the 737, 727-200, 747, 757, 767, 747-400 and the 777.

His assignments have covered all aspects of the flight test business, from leading the development of tools and processes, to conducting airplane testing, to managing the complete flight test validation effort of Boeing airplanes. His most memorable highlight is being the test director on the number one 747-100, during its initial validation program.

Currently as Director of Flight Test Engineering and Test Programs, Jerry is responsible for leading the activities necessary to validate that Boeing airplanes meet customer service-ready expectations. The requirements for these activities come from Boeing design groups, national and foreign governmental regulatory agencies, and the airlines. The organization is responsible for development, integration and management of a plan to accomplish a service ready outcome.

Jerry is also very active in the Boeing Employee Community Fund, the largest employee owned and funded charitable organization in the world. In this, Jerry keeps his Italian heritage at the forefront by sponsoring on the silent auction the yearly, and widely-sought after, "Dinner with the Don's."

He attained his BS in aeronautical engineering from California Polytechnic State University, San Luis Obispo, in 1965 and an Executive Masters of Business Administration from the University of Washington's Executive Program in 1986.

Jerry lives in Redmond, Washington with his wife, Judy. They have two children.

Joint AIAA/SFTE Lecture - Dinner Meeting

Date: **Tuesday, March 23, 2004**
Place: Old Spaghetti Factory 2801 Elliott Ave, Seattle, WA 98121
Time: 6:00 PM Social, No-Host Bar
6:30 PM Dinner –Ravioli or chicken fettucine
7:00 PM Program – “Flight Testing of Boeing Commercial Jet Transports: Call anytime 425-717-5691
or send email to david.j.paisley@boeing.com or Paul Clement paul.l.clement@boeing.com

Please make reservations by March 19th

Entrée choices are Spinach and cheese ravioli or breast of chicken fettucine. **Please specify choice when reserving.**

Dinner Price:

\$15 AIAA/SFTE Members and Guests

\$18 Non-Members

\$5 Students and Educator Associates

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

A reservation is a commitment to pay!

Pacific Northwest Section

Evolution of Flight Report Update by Billy Roeseler

I'm not much of an artist, so I will use other people's images to articulate the message I am trying to convey in words. Some years ago, 3 of our local members had a dream about designing and building a self launched sail plane. The dream is still alive.



The Ultralight SparrowHawk glider from Bend, OR, raises the bar for modern glider performance. With only 36 feet of span and 155 lbs empty weight, it's L/D of 36 at 50 kts is in a class with the best European gliders, which cost and weigh twice as much. www.windward-performance.com

The next generation of aircraft may have wing tip devices similar to the rudders found on this 1970 vintage Fledge hang glider, now owned by Paul Dees.



This design was the most popular semi rigid glider between 1970 and 1980. You can learn all about them at <http://midtoad.homelinux.org/midwinter.ca/RigidWings/fledge.htm>

In the January newsletter, we reported progress on a small fleet of electric powered ultralights we called the "Right Flyers." These were quick and dirty aircraft designed and built in only a few hours by my grandkids and some friends in the Puget Sound area. All three of these Right Flyers had soft wings, which could not support themselves without airspeed. Flying

such aircraft with 5-10 kts of steady wind is easy, but if you try to fly with no wind, you may have trouble getting the wing to jump up overhead. If it gets off to the side when still behind the prop, and the risers deflect the prop guard into the prop, then there is that sickening sound, and repairs will be needed. Here is where we were 8 Feb after increasing our battery pack from 200 to 280 cells, increasing our power available from 8 to 10 kw. There was no wind at Arlington to help us inflate the parafoil



The easy way out is to simply save up \$50K and buy an electric powered sail plane from Europe. Here is the Silent In from Italy, the one I told you about three years ago after my first trip to Oshkosh. It is now available from Germany with an electric motor and enough batteries to get you three times to 3000 ft. http://www.airenergy.de/english/silent/silent_data.htm



But for any of you who don't have \$50K and would still like to build and fly your own airplane, what we have learned from our Right Flyers may come in handy. We have learned:

1. Aircraft that can support themselves with no wind may be easier for one person to handle than the powered parafoils.
2. Electric propulsion is feasible, but the cost and weight are still a little higher than gas motors, especially if you plan to fly more than 5 minutes at a time.
3. Although it is possible to design and build an airplane in less than 100 hours, the ones that have over 1000 hours invested in them usually fly better.

PNW Aerospace Timeline

Dinner Meeting and Lecture

March 23, 2004 Dinner Meeting

Topic:	Flight Testing of Boeing Commercial Jet Transports with Jerry Zanatta
Date/Time:	Tuesday, March 23 at 6:00 p.m.
Location:	The Old Spaghetti Factory, 2801 Elliott Ave, Seattle

Royal Aeronautical Society Presentation

I was not aware until a few weeks ago that the AIAA and Royal Aeronautical Society are corporate members of each other's societies. I was also not aware that there is also a local branch of the RAeS in Seattle. Now that we've discovered each other, we have decided to work together coordinating our programs and promoting each other's activities. The PNW Section of AIAA will not hold a dinner meeting in May, but instead suggest that members attend the RAeS lecture advertised below. *Dave Paisley*

Please join the Royal Aeronautical Society in welcoming Tom Cogan, 7E7 chief project engineer discussing the 7E7 program.

Museum of Flight
6:00 p.m., Tuesday, 18 May
This lecture is free of charge and all are welcome

3rd Annual Billiards Social at Jillian's Sponsored by the Young Professionals Committee of the PNW AIAA Section

The Young Professionals Committee invites all section members to the 3rd annual Billiards Social on Tuesday, April 6, 2004. Located once again at Jillian's Billiards in Seattle, WA, the event will begin at 6:00 pm and end at 9:00 pm. Fierce competition on the pool tables between the students, young professionals and grizzled veteran members is expected.

A light supper featuring barbecue chicken wings, assorted gourmet pizza, vegetables and tortilla chips will be served. Soft drinks are included.

Please RSVP to Emmanuel Domingo at e_domingo@hotmail.com or (206) 227-7819 no later than March 30, 2004. No talent (for playing pool) required!

Full time students: \$5
Young Professionals (Under 35) \$10
All other members \$15

Guests of members welcome (same price as accompanying member)

Retired Members Brunch

March 20th

Speaker:	Peter Morton, Del Fadden (see below)
Date/Time:	March 20, 9:00AM
Location:	Museum of Flight, Seattle
Contact:	Tom Holgate 253-838-0333 (\$20 per person)

Owning and Operating a New High Tech General Aviation Airplane- March Retiree Brunch with Peter Morton and Del Fadden



Delmar Fadden spent 6 year as a pilot in the USAF flying C-135 and C-141 aircraft. The next 30 years were spent at Boeing working in Flight Deck Technology, Avionics, and Cabin Systems.

Peter Morton joined Boeing in 1958 and spent 42 years in various assignments in the company. His areas of activity included training customer airline personnel, marketing 737 and 747 airplanes, flight deck design, leadership development, and human resources.

Del, Peter Morton and Harty Stoll were the team responsible for the 2-crew, common type rating design of the 757 and 767 flight deck. This flight deck featured the first use of computer generated displays in Boeing commercial airplanes. Del continued with new technology application to the 747-400 and the Next Generation 737.

Following his retirement in 1999, Del teamed with Peter again to own and operate a Cirrus SR20. General Aviation is undergoing rapid change as computer generated displays and modern digital avionics are making their way into more and more light airplanes. Del and Peter are selectively incorporating new technology where safety or operating efficiency can be improved. They are also consulting with various GA manufacturers to facilitate development of features and capabilities that truly enhance the GA pilot's ability to manage his aircraft.

Price increase to \$20 to support Al Haynes' fundraising for his daughter's bone marrow transplant. Al Haynes spoke at the retiree brunch on September 18, 1993, detailing the UAL flight 232 into Sioux City and encouraging disaster planning.

Section website: http://www.geocities.com/aiaa_2000/index.html
 National website: <http://www.aiaa.org>

Please submit newsletter materials to Joe Dortwegt by the 23rd of April for the May Newsletter.

Outstanding Section Awards
 1972-1973
 1977-1978
 1978-1979
 1991-1992
 1993-1994
 1994-1995
 1994-1995

Membership Award
 1997-1998

Young Member Activity Awards
 1990-1991
 1991-1992
 1994-1995
 1995-1996

Section Special Event Awards
 1976-1977
 1977-1987
 1978-1979
 1982-1983
 1987-1988

Career Enhancement Award
 1997-1998

Newsletter Awards
 1994-1995
 1995-1996
 1996-1997

A PUBLICATION OF AIAA THE PACIFIC NORTHWEST SECTION
Address Corrections

Send to: **AIAA**
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Now make corrections on-line at
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Section Officers and Directors

Position	Name	Address (Mail stop if Boeing*)	Phone	Email address
Council				
Chairman	Vera Martinovich	02-XJ	425-266-8664	vera.a.martinovich@boeing.com
Vice-Chairman	Dave Paisley	03-52	425-717-5691	david.j.paisley@boeing.com
Secretary	Joe Dortwegt	03-52	425-294-0054	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
Elected, non-voting				
Vice-Chairman-Elect	Dave Lednicer	2133 152nd Ave NE/Redmond, WA 98052	206/746-1299	dave@amiwest.com
Secretary-Elect	Jon Lee	5108 71st Way NE, Olympia, WA 98516	206-934-9782	drwatson@u.washington.edu
Treasurer-Elect	Eric Lund	505 5 th Ave. S., Suite 300, Seattle, WA 98104	206-438-0612	elund@andrews-space.com
Appointed				
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 nd Place SE, Sammamish, WA. 98075	206-768-7166	bmsarao@hotmail.com
Museum of Flight Liaison	Open			
Pre-College Outreach	Scott Eberhardt	P.O. Box 352400, UW, Seattle, WA 98195	206-543-6508	scott@aa.washington.edu
Public Policy	Karl D'Ambrosio	5026 18 th Avenue NE, Seattle, WA 98105	253-395-3710	karld@emfcowa.com
Young Professionals	Emmanuel Domingo	2779 NE Liberty, Gresham, OR 97030	206 227-7819	E_domingo@hotmail.com

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



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PACIFIC NORTHWEST SECTION

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AIAA
 Pacific Northwest Section
 Attn: Joe Dortwegt
 14619 62nd Pl W
 Edmonds, WA 98026