



Newsletter

Volume 33, Number 8, April 2003

Lockheed X-35 Flight Testing

*Speaker: Tom Morgenfeld, Skunk Works Chief Test Pilot / Director of Flight Operations
AIAA Distinguished Lecturer*



In the 1990's preliminary work in the search for a stealthy aircraft to replace the A-10, the AV-8 Harrier, the F-16, and the F/A-18 evolved into the Joint Strike Fighter program. Sponsored by the United States Navy, Air Force, and Marines, along with the UK Royal Navy and Air Force, the

program entered the Concept Demonstration Phase in 1996 as Lockheed and Boeing competed to build and fly concept aircraft.

During concept definition, Lockheed built and flight-tested three variants, the X-35A (USAF), X-35B (USMC/Royal Navy and Royal Air Force) and X-35C (USN). These aircraft demonstrated aerial refueling, formation flying, supersonic flight, and handling qualities. The X-35B demonstrated vertical takeoff and landing and hover as well.

In the fall of 2001, Lockheed, together with its partners Northrop Grumman and BAE Systems, was chosen to proceed to the



System Design and Development Phase. The company will build 22 F-35 aircraft in this phase, eventually building an estimated 3000+ aircraft over the program life.

This multi-media presentation will discuss the Lockheed program, focusing on flight-testing the company's three aircraft variants.

Tom Morgenfeld began his fighter pilot career in the US Navy after graduating from the US Naval Academy in 1965. Over the course of two combat tours of duty, he flew 120 missions (including more than 500 carrier landings) in the F-8 Crusader. Between his two tours, Mr. Morgenfeld earned his Master of Science degree in Aeronautical Engineering at the Naval Postgraduate School.



In 1976, Mr. Morgenfeld was ordered to Air Test and Evaluation Squadron Four, where he participated in several classified test programs and served as the F-18 Project Pilot. He participated in an exchange program with the Air Force in the 4477th Test and Evaluation Squadron and became the first naval aviator to qualify as an Air Force aggressor pilot.

After leaving active duty in 1979, Mr. Morgenfeld went to work



at Lockheed, flight-testing the F-117 and YF-22A aircraft. He was the Chief Test Pilot for the Lockheed Joint Strike Fighter program, performing the first flight of the X-35 and testing all three versions of the aircraft. Mr. Morgenfeld was promoted to Chief Test Pilot for Skunk Works in 1991 and has been the Director of Flight Operations since 1999. He is a Fellow and past President of the Society of Experimental Test Pilots.

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Joint AIAA/SFTE Lecture - Dinner Meeting

Date: **Tuesday, April 22, 2003**
Place: **Old Spaghetti Factory, 2801 Elliott Avenue, Seattle**
Time: 6:00 PM Social, No-Host Bar
6:30 PM Dinner
7:30 PM Program – **X-35 Flight Test**

*Please make reservations by 4/18.
A reservation is a commitment to pay!*

Dinner Reservations: Call anytime (425) 342-0988 or send email to vera.a.martinovich@boeing.com or michael.f.bartlett@boeing.com
Entrée choices are chicken fettuccine or spinach 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)



AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS
PACIFIC NORTHWEST SECTION
BALLOT

For the Election of Council Members and Section Officers, 2003 -2004 Section Year

Instructions: Vote for ONE candidate for each position, except advisory council, vote for two. Ballots should be mailed no later than April 30, 2003. Ballots received after May 15th will not be counted. Mark the ballot below and mail to: Laura Kistler, OR -HH, Boeing, Box 3707, Seattle, WA 98124 -2207. You may also submit your votes by e-mail to laura.s.kistler@boeing.com. Only one vote per member.

• **CHAIRMAN**

Vera Martinovich _____

• **VICE-CHAIRMAN ELECT (Vote for One)**

Vivek Gupta _____
 David Lednicer _____
 David Paisley _____

• **TREASURER**

Paul Moorehead _____

• **SECRETARY**

Joe Dortwegt _____

• **VICE-CHAIRMAN**

Ben Sarao _____

• **ADVISORY COUNCIL (Vote for Two)**

Doug Ball _____
 Scott Eberhardt _____
 Martin Gibbins _____
 Mark McConoughey _____

• **TREASURER ELECT (Vote for One)**

Eric Lund _____
 (Write In) _____

• **SECRETARY ELECT (Vote for One)**

Jon Lee _____
 (Write In) _____

For Vice -Chairman Elect –Vivek Gupta



Biographical Sketch : Vivek Gupta earned his Bachelor's degree from Institute of Technology (ITBHU) and Master's degree from Indian Institute of Technology (IIT) Delhi, India in Mechanical Engineering. He joined AIAA in 1999. Vivek is a Senior Specialist Engineer at Boeing Commercial in Everett Stress Liaison. Previously, he worked in the Interior Responsibility Center, Knowledge Based Engineering and Computer & Numerical Control in Boeing. He has also worked in Daimler Chrysler and Toyota in Product Engineering. Vivek is currently a technical evaluator for various aerospace and automotive committees in SAE for improvement of the quality of their research papers for future publications.

Candidate's Statement : It's been a very challenging and rewarding to serve as Technical Evaluator for SAE. As Vice Chairman Elect, I will seek your valuable input and help for furthering the goals of AIAA and increasing AIAA PNW section membership.

For Vice -Chairman Elect –David Lednicer



Biographical Sketch : David Lednicer earned his B.S.E. (1979) and M.S. E. (1980) in aerospace engineering from the University of Michigan. He joined the AIAA in 1977, while a student and he has been a member of the PNW chapters since 1989. From 1994 to 1997, he served on the AIAA Applied Aerodynamics TC. He has published a number of AIAA, AHS, ICAS, SAE, JRAeS and SNAME papers, as well as serving as a speaker at several AIAA dinner meetings. Dave is currently the Deputy Director of Aerospace Applications at Analytical Methods, Inc., a small company in Redmond.

Candidate's Statement : After many years of enjoying the results of other people's labors running our AIAA chapter, I would like to contribute my share. In particular, as Vice -Chairman Elect, I would like to work on increasing attendance at the dinner meetings.

For Vice -Chairman Elect -David Paisley



Biographical Sketch : David Paisley designs airplanes in Boeing Commercial product development. He is an Associate Technical Fellow of the Boeing Company and Associate Fellow of the AIAA. Joined AIAA in 1990 - Greater Philadelphia AIAA Council, AIAA Aircraft Design Technical Committee (member and chair), AIAA Technical Director for the World Aviation Congress twice. B.Sc. in Aero. Eng., University of Manchester; Ph.D. in Aero. Eng., Cranfield University; M.S. in Management, Antioch (Seattle).

Candidate's Statement : After working at the national level, I am looking forward to working at the local level. As a senior member of the aerospace community, I feel one of my primary responsibilities is to cultivate the next generation of engineers, particularly through professional development. I look forward to bringing my experience and interest to bear on the future of the AIAA Pacific Northwest Section.

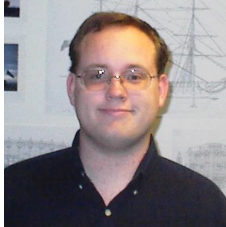
For Treasurer -Elect –EricLund



Biographical Sketch : B.S. Aerospace Engineering and B.S. Computer Engineering from Embry Riddle Aeronautical University (Prescott, AZ) in April, 2002. Earned Outstanding Graduate in A.E., Outstanding Graduate in C.E., and Chancellor's Awards due to his scholastic, extra-curricular, and community service activities. Eric has been an AIAA Member since 1997 and four-time AIAA Undergraduate Scholarship recipient. Currently employed with Andrews Space & Technology as a Systems Engineer supporting various NASA, DARPA, and commercial programs. He is also a member of IEEE, SAE, HKN, and ΣΓΤ.

Candidate's Statement : For four years, I served my collegiate AIAA chapter in many different capacities, gaining perspective and building teamwork skills. Now I look forward to facilitating Section activities, serving Members' needs, and promoting aerospace and education in the 2nd Century of Flight.

For Secretary -Elect –JonLee



Biographical Sketch : After graduating with B.S. in Aeronautics from the University of Washington in 2002, Jon Lee transcended and became a graduate student. He is currently pursuing an M.S.A.A. at UW. Jon Lee has been a TA for the Department of Aeronautics & Astronautics' Introduction to Air and Space Vehicles and Airplane Design classes. His professional interests include Airplane Design, Hypersonics, and Engineering Education. Jon Lee is an Eagle Scout, and has served for a number of years as a Judge at the Washington State Science and Engineering Fair.

Candidate's Statement : For the past 2½ years, I've been a regular attendee at the monthly dinner meetings, and really enjoy what the AIAA has to offer. As an AIAA officer, I would look forward to working to further the goals of this organization, as well as bring a student's point of view to the table.

For Advisory Council –DougBall



Biographical Sketch : Doug is Manager, Enabling Technologies and Research, Airplane Performance and Propulsion, Boeing Commercial Airplanes, Renton, Washington. 24 years at Boeing, 707, 737, 747, 757, and 767 after stint at GD, Ft Worth, F-111 and F-16. Currently serving on an advisory committee to NASA, National Research Council, and Cal Poly San Luis Obispo, president of Boeing Aerogolf league and develop aerodynamic improvements for race cars.

For Advisory Council –ScottEberhardt



Biographical Sketch : Scott earned his undergraduate degree at the Massachusetts Institute of Technology in 1980 in the field of Aeronautics and Astronautics, followed by a Master's Degree in the same field and institution in 1981. He then continued his studies at Stanford University, where he was awarded his Ph.D. in 1985 in Aeronautics and Astronautics. Professor Eberhardt gained additional experience as a research scientist for the NASA Ames Research Center in the time from 1984-1986, and then joined the UW Aeronautics and Astronautics department in 1986.

For Advisory Position –MartinGibbins



Biographical Sketch : Martin Gibbins holds mechanical engineering and engineering mechanics degrees from Virginia Tech, and joined AIAA in 1985. Since then he has served as treasurer, technical programs director, honors & awards director, and section chair. He worked in structural R&D for commercial airplanes and space systems and in structural design on the F-22 fighter airplane. He is now a manager of airframe structures on the F-22. He also tutored high school students in physics, mathematics and chemistry.

Candidate's Statement : As the leading professional society for aerospace engineering and science the PNW section has a special role and opportunity in connecting our local AIAA membership to the nationwide organization. In addition, the local section provides opportunities for members to develop and hone their leadership skills. On the advisory council I will work to enhance both these opportunities.

For Advisory Position –MarkMcConoughey



Biographical Sketch : Mark McConoughey earned his B.S. in Mechanical Engineering from Michigan State University. He has served four years in the U.S. Army (military intelligence). He joined Boeing in 1979. He has spent most of the time since in mechanical flight controls design with short stints in payloads and liaison engineering.

Candidate's Statement : I thank Laura Kistler for offering my name in nomination, giving me a chance to serve on the Advisory Council of the Pacific Northwest Section of the AIAA.

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

Please submit newsletter materials to
 Karl D'Ambrosio by the 25th of March
 for the April Newsletter.

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

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Now make corrections on-line at
<http://www.aiaa.org>
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Section Officers and Directors

Position	Name	Address (Mail stop if Boeing*)	Phone	Email address
Council				
Chairman	Eric Lester	0R-RA	425-294-6979	eric.s.lester@boeing.com
Vice-Chairman	Vera Martinovich	0R-RK	425-342-0988	vera.a.martinovich@boeing.com
Secretary	Joe Dortwegt	0R-RM	425-342-5089	joseph.dortwegt@boeing.com
Treasurer	Paul Moorehead	67-65	425-237-5176	paul.j.moorehead@boeing.com
Advisory Council	William Gjertson	8J-72	425 773-3090	william.g.gjertson@boeing.com
Advisory Council	Billy Roeseler	0R-HH	425-294-2810	wm.g.roeseler@boeing.com
Advisory Council	Doug Ball	67-LH	425 234-1016	douglas.n.ball@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	0R-HH	425-294-2553	laura.s.kistler@boeing.com
Elected, non-voting				
Vice-Chairman-Elect	Ben Sarao	1432 242 nd Place SE, Sammamish, WA. 98075	206-768-7166	bmsarao@hotmail.com
Secretary-Elect	Open			
Treasurer-Elect	Open			
Appointed				
Webmaster	Jane Kuta	43-19	206-662-2820	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	Karl D'Ambrosio	5026 18 th Avenue NE, Seattle, WA 98105	253-395-3710	karld@emfcowa.com
Nominations	Laura Kistler	0R-HH	206-544-0507	laura.s.kistler@boeing.com
PSEC Liaison	Eric Lester	0R-RA	425-294-6979	eric.s.lester@boeing.com
PSEC Liaison	Vera Martinovich	0R-RK	425-342-0988	vera.a.martinovich@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	Rich Hepler	4C-40	206-544-0507	richard.a.hepler@boeing.com
Public Policy	Karl D'Ambrosio	5411 South 226 th Str, Kent, WA 98032	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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