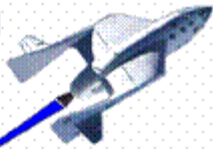


Aviation Exploring Post 107

Aerospace Education And
Youth Development

Somerset Air Service, Inc.
SMQ



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Aviation Exploring is "Learning for Life" sponsored by:
Somerset Air Service, Inc.
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P.O. Box 197, Bedminster, NJ 07921-0197
"A Field of Dreams"
<http://www.somersetair.com>

Aviation Exploring Post 107 has taken off and is on an exciting journey in aerospace. Our journey is documented in our **AEP107 FLIGHT LOGS**. Our experiences, activities, member information are recorded and published to our membership, alumni, recruits, partners and friends of AEP107, generally on a weekly basis. The AEP107 Flight Logs are also posted on www.aep107.org.

Please send all FLIGHT LOG information / updates to: chairman@aep107.org

YOUTH PROTECTION NOTES: The AEP107 Flight Log does not publish the last names of Aviation Explorers ages 17 and under.

The AEP107 Flight Logs are distributed individually via Bcc:

PROGRAM CALENDAR [Return to Contents](#)

NOVEMBER 2005

THU	17	7 PM	Gregory Ciurpita Aircraft Design & Engineering 7:30 PM	Ian	SMQ Office
THU	24		THANKSGIVING	FAMILY	

Gregory Ciurpita, Bio & Presentation Outline:

I have a BS and MS Electrical Engineer degrees from the New Jersey Institute of Technology (NJIT) and have been a Telecommunications Engineer for 20 years. Currently, I work at Flarion Technologies in Bedminster where I have developed digital signal processing software in speakerphones, speech recognition, mobile phones, and optical amplifiers. My interests include RC and full-scale soaring. I have written several design related articles for the RC Soaring Digest.

I hope to BRIEFLY discuss how various engineering fields apply to aviation, and some of my personal experience with how engineering is a constant learning process. The second part of talk includes three specific topics in aircraft design: wing loading and spar design, longitudinal balance, and drag profiles across the wing.

Greg Ciurpita, Flarion Technologies
908 997-9736 / g.ciurpita@flarion.com

UP & COMING EVENTS TO SCHEDULE:

AEP107 6th ANNUAL DINNER @, 94th Bomb Group Restaurant
THU, DEC 28, 6:00 to 9:00 PM, Essex County Airport, Fairfield, NJ

CIGAR BOX SOARING CONTEST @ 4H Facility

SAT, APR 8, 2006, 310 Milltown Road, Bridgewater, NJ

This contest is open to the NJ aerospace community.

AEP107 Note: Currently we need a program manager and youth director for this program.

Raritan Valley District, BSA

Aviation Merit Badge Program @ Central Jersey Regional Airport

SAT, MAY 6, 2006, Hillsborough, NJ

EAA AirVenture 2006 @ Oshkosh Airport
SUN, JUL 23 through SAT, JUL 29, 2006, Oshkosh, WI

AEP107 NOTE: We have an open invitation for members of our Partner Programs to travel and stay with us at AirVenture 2006. Travel and dormitory room costs are approximately \$450 for Sun, JUL23 through Sat, JUL29.

CLASSIFIED

ROOM NEEDED: AEP107 is in need of free room / area to build and store aviation model projects. Unfortunately, there is no room at the Somerset Airport, 4-H Club or the Raritan Valley Community College. Please contact me if know of a situation where a person / company has room in the Bedminster area that they wish to make a tax deductible donation for our use.
Thank You: chairman@aep107.org

WANTED: Eclipse 500 delivering position for 2007 Or 2007. TX aircraftowner.com

AEP107 ACTIVITIES [Return To Contents](#)

CORRESPONDENCE:

From: Dr. G. Jeremiah Ryan, President, Raritan Valley College, Dated: June, 7, 2005
Re: A room for AEP107 r/c model building activities
Reply: "Sorry, we have no extra space. We are building a new classroom building".

PARTNER PROGRAMS [Return To Contents](#)

EAA Chapter 643: <http://www.eaa643.org>

Chapter Meeting: Third Monday of each month.

EAA Chapter 1333: <http://www.friendsofcentraljerseyairport.org>

Fly For Fun, Inc. @ Somerset Airport: <http://members.aol.com/soaratsomerset/index.html>
We Do Glider Rides - You and a certified pilot will be towed aloft in a glider. Your pilot will release from the towline. Remaining near the airport, the pilot will allow you to take the controls for a time if you wish, or just relax and go along for the ride. Continuing lessons are available for those who wish to pursue the sport of soaring.

Fly for Fun, Inc. – Operations: <http://groups.yahoo.com/group/somersetsoaring/files/>

Hawk Valley Soaring Club: <http://www.geocities.com/hvsoaring>

Raritan Valley District, PPC, BSA: <http://www.ppbsa.org>

Somerset Air Service, Inc.: <http://www.somersetairport.com>

Somerset County 4-H Club: <http://somerset.rce.rutgers.edu>
4-H Space & Astronomy Club: <http://www.geocities.com/sc4hastro>

Broken Props Model Airplanes

Somerset Sentinels Rocket Club

Somerset Signal Senders, Inc.: <http://www.somersetsignalsenders.org>

Club Meeting: Last Wednesday of each month

AEP107 MEMBER & ALUMNI ACTIVITIES (Return On Investment)

James Alaggio, AEP107 Alumni

Partner, Husky Aircraft Sales L.L.C., a.k.a. Skyinsights



As an AEP107 Member, James has been President for 4 years; 6 years as an officer.

Along with Capt. Stephen M Lind, J.D, Managing Partner, James has started the Husky Aircraft Sales L.L.C., a.k.a. Skyinsights.

James is also an Experimental Test Pilot, flight testing experimental and prototype aircraft. He has been Co-Chief Pilot of a banner towing operation for 2 years and actively participates in Cross Country Soaring and soon Cross Country Sailplane Racing.

His primary goal is to become an International Airshow Performer and inspire future generations of Aviators.

Please contact James for Husky Aircraft sales and pilot services at:

<http://www.skyinsights.com/> 732-310-7873(c) husky@skyinsights.com

AEROSPACE NEWS [Return To Contents](#)

AEROSPACE NEWS provides an insight to the aerospace industry for your use as you identify your Career Goal and start your Career Development. The following information is representative of the aerospace news available to you.

PERSONAL / BUSINESS DEVELOPMENT [Return To Contents](#)

Young Money Magazine: <http://www.youngmoney.com>

SCORE: <http://www.scorechapter14.org> - SCORE "Counselors to America's Small Business" is the best source of free and confidential small business advice to help you build your business—from idea to start-up to success.

Soaring Safety Foundation "Wing Runner Online Course":

<http://www.soaringsafety.org/school/wingrunner/toc.htm>

Aerospace: NEWS SOURCES [Return To Contents](#)

Aviation International News: <http://www.ainonline.com/index.html>

NJDOT, Division of Aeronautics: <http://www.state.nj.us/transportation/commuter/aviation>

New Scientist Space: <http://www.newscientistspace.com/home.ns>

SPACE.com: <http://www.space.com>

Aerospace: THE FUTURE [Return To Contents](#)

Joint Planning & Development Office: http://www.jpdo.aero/site_content/index.html

National Consortium for Aviation Mobility (NCAM) – SATS: <http://ncam-sats.org/>

NASA-Small Aircraft Transportation System (SATS): <http://sats.larc.nasa.gov>

Access 5: http://www.access5.aero/site_content/index.html

The Mars Foundation: <http://www.marshome.org>

Space Future: <http://www.spacefuture.com/home.shtml>

Space Elevator

Space Elevator 2010: <http://www.elevator2010.org>
Space Elevator Reference: <http://www.spaceelevator.com/>
LiftPort Group Inc.: <http://www.liftport.com/index.php>

AEROSPACE: News [Return To Contents](#)

Boeing Projects \$770 Billion Market for New Airplanes in Asia-Pacific
http://www.boeing.com/news/releases/2005/q4/nr_051107g.html

TAIPEI, Taiwan, Nov. 7, 2005 – The Boeing Company [NYSE: BA] detailed its 2005 Current Market Outlook (CMO) for the Asia-Pacific region today, forecasting a market for about 7,200 new airplanes worth \$770 billion over the next 20 years. Over the forecast period, Asia-Pacific will remain the largest market outside North America for new commercial airplanes.

Thousands of UAVs at work in the skies

Thousands of unmanned aerial vehicles are at work dusting crops, taking photographs and tracking insurgents, observers say. The military operates the most sophisticated UAVs. The Federal Aviation Administration oversees operations of commercial UAVs, and it issues a certificate of authorization only after other pilots operating in the area are given notice of the UAV. [Daytona Beach News-Journal \(Fla.\)](#) (11/2)

Outlook for airlines improves for 2006 on strong demand

Strong demand for travel and a reduction in the number of available seats has improved the airline industry's outlook for 2006. Carriers will also benefit from falling fuel prices, analysts say. **Continental Airlines** reported strong revenue results in October; other airlines reported improving revenue trends when they reported quarterly results. [The Arizona Republic \(Phoenix\)](#) (11/6)

Largest Optical Telescope in Southern Hemisphere To Be Inaugurated in South Africa

<http://www.spaceref.com/news/viewpr.html?pid=18204>

"The largest optical telescope in the southern hemisphere will be inaugurated on 11 November at the South African Astronomical Observatory (SAAO) in Sutherland, South Africa, by the President of South Africa Thabo Mbeki. The Southern African Large Telescope (SALT) can gather more than 25 times as much light as any existing telescope in Africa, enabling it to detect a candle flame as far away as the moon."

Forecast: 2006 will be good for jets

Honeywell predicts next year will bring a bumper crop of business jets, which would be a boon for Wichita.

BY MOLLY MCMILLIN, The Wichita Eagle Posted on Mon, Nov. 07, 2005

<http://www.kansas.com/mld/kansas/business/13100073.htm>

The number of business jets delivered in 2006 is expected to hit record highs, according to Honeywell Aerospace's 14th annual business aviation outlook, which was released today. Next year, the outlook says, the industry should ship 800 business jets, which would set a record. "The industry is in great shape right now," said Charles Park, Honeywell Aerospace's director of market analysis.

Boeing to manage Singapore's maintenance service

Boeing will manage **Singapore Airlines'** spare parts inventory and airplane maintenance. The airline is the first to hire Boeing for its integrated maintenance service. Terms of the contract were not disclosed. [Forbes/Associated Press](#) (free registration) (11/7)

Boeing Business Jets Surpasses 100th Order Sales Goal

BBJ Also Expands Network of Authorized Service Centers

http://www.boeing.com/news/releases/2005/q4/nr_051108g.html

ORLANDO, Nov. 8, 2005 – Boeing [NYSE: BA] Business Jets today announced it has sold a program total of 102 BBJs, surpassing its goal to reach 100 orders before the end of the year. The achievement is unmatched by other large-cabin, ultra long-range business jet manufacturers. "There is a significant market that values large cabins and long-range capability," Boeing Business Jets President Steven Hill said during a media briefing at the National Business Aviation Association's convention in Orlando. "With three times the cabin space as traditional business jets and the ability to fly more than 6,000 nautical miles, the BBJ offers the ability to travel with family, friends or business associates while working, eating, sleeping or entertaining in the air as you would on the ground. The order tally underscores the value of the BBJ, and we expect that trend to continue."

Boeing to Set New World Record for Distance with 777-200LR Worldliner Flight

777-200LR is the world's longest-range commercial jetliner

http://www.boeing.com/news/releases/2005/q4/nr_051108h.html

HONG KONG, Nov. 9, 2005 – The Boeing Company [NYSE: BA] is set to make aviation history today when a Boeing [777-200LR](#) Worldliner takes off from Hong Kong flying eastbound to London, attempting to set a world distance record. The 777-200LR (Longer Range) will take off with a full load of fuel and 35 passengers and crew, flying nonstop on a route that is likely to exceed a distance of more than halfway around the world.

"The record distance flight is a demonstration of the outstanding operating efficiency and reliability of the Boeing 777-200LR Worldliner," said Lars Andersen, 777 Program vice president and program manager. "The Worldliner uses less fuel to fly farther, carry more passengers, more comfortably and with more revenue cargo than any other commercial jetliner."

Boeing Jet Breaks Nonstop-Flight Record

<http://www.777.newairplane.com>

<http://dailynews.att.net/cgi-bin/news?e=pri&dt=051110&cat=news&st=newsd8dpmaco3&src=ap>



Updated 10:19 AM ET November 10, 2005, By EMILY BEHLMANN

LONDON (AP) - A Boeing Co. jet arrived in London from Hong Kong on Thursday, breaking the record for the longest nonstop flight by a commercial jet.

The 777-200LR Worldliner _ one of Boeing's newest planes _ touched down shortly after 1 p.m. (8 a.m. EST) at London's Heathrow Airport after a journey of more than 11,664 miles. The previous record was set when a Boeing 747-400 flew 10,500 miles from London to Sydney in 1989.

A representative of Guinness World Records, which monitored the flight, presented Boeing's Lars Andersen with a certificate confirming it was for the longest nonstop commercial flight.

Air Canada Locks In Boeing 777s and 787 Dreamliners

Up to 96 modern, efficient and comfortable airplanes to renew and expand fleet

http://www.boeing.com/news/releases/2005/q4/nr_051109g.html

SEATTLE, Nov. 9, 2005 - Air Canada today signed a contract with Boeing [NYSE: BA] to upgrade the airline's fleet with up to 36 Boeing [777s](#) and 60 Boeing [787 Dreamliners](#). The conclusion of the order comes six months after the airline announced a widebody fleet renewal plan, subject to a number of conditions.

"We're extremely pleased to move forward with the renewal of Air Canada's widebody fleet with these new Boeing airplanes," said Robert Milton, president and chief executive officer of ACE Aviation Holdings Inc., Air Canada's parent company. "Our analysis of these aircraft confirmed overwhelmingly attractive economics; we estimate the fuel burn and maintenance cost savings alone on the 787 to be approximately 30 per cent versus the 767s they will replace. This is particularly important in the current high-fuel-price environment."

AEROSPACE: The Future [Return To Contents](#)

Stealth – Low Observable Technology



<http://www.lowobservable.com/future.htm>

Finally, stealth aircraft were limited to nighttime flying as they could be spotted at ease during the day. This leads to the subsequent task in future stealth aircraft development...the creation of a plane invisible to the eye. Lockheed's legendary 'Skunk Works' experimental arm is known to be developing new electro-chromic materials. Their aim is to create camouflage panels which can change color or tint when subjected to an electrical charge. Other engineers like Boeing and Northrop, are also working on similar stealth technologies.

One of these systems is the "electrochromic polymer" that is being developed at the University of Florida. These thin sheets cover the aircraft's skin and sense the hue, color and brightness of the surrounding sky and ground. The image received is then projected onto the aircraft's opposite side. When charged to a certain voltage, these panels undergo color change. Another similar "skin" is being tested at the top-secret Groom Lake facility at Area 51 in Nevada. It is reputed to be composed of an "electro-magnetically conductive polyaniline-based radar-absorbent composite material." The system also utilizes photo-sensitive receptors all over the plane that scan the surrounding area, subsequently the data is interpreted by an onboard computer which outputs it much like a computer screen making the aircraft virtually invisible to site.

Nanomaterials and Their Applications

<http://www.azom.com/details.asp?ArticleID=1066>

Topics Covered

[Background](#)

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[Next-Generation Computer Chips](#)

[Kinetic Energy \(KE\) Penetrators with Enhanced Lethality](#)

[Better Insulation Materials](#)

[Phosphors for High-Definition TV](#)

[Low-Cost Flat-Panel Displays](#)

[Tougher and Harder Cutting Tools](#)

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[Longer-Lasting Satellites](#)

[Longer-Lasting Medical Implants](#)

[Ductile, Machinable Ceramics](#)

[Large Electrochromic Display Devices](#)

[Summary](#)

Sandia Conducts Tests At Solar Tower To Benefit Future NASA Space Explorations

[Sandia National Laboratories](#), 2005-11-08



<http://www.sciencedaily.com/releases/2005/11/051108083116.htm>

For the last two years, tests have been conducted at Sandia National Laboratories' National Solar Thermal Test Facility to see how materials used for NASA's future planetary exploration missions can withstand severe radiant heating.

The tests apply heat equivalent to 1,500 suns to spacecraft shields called Advanced Charring Ablators. The ablaters protect spacecraft entering atmospheres at hypersonic speeds.

The test facility includes a 200-ft. "solar tower" surrounded by a field of hundreds of sun-tracking mirror arrays called heliostats. The heliostats direct sunlight to the top of the tower where the test objects are affixed.

Popular Science , May '97 Cover and Article Graphics.

For article titled. "TOP SECRET INVISIBLE AIRCRAFT-Daytime Stealth For Future Fighters".



