

Aviation Exploring Post 107

Aerospace Education And
Youth Development

Somerset Air Service, Inc.
SMQ



FLIGHT LOG MARCH 2008

CONTENTS

Program Calendar

Up & Coming Events

Classifieds

Aerospace Program – Completed Activities

AEP107 Member and Alumni News

Aerospace Employment Information

Aerospace Business News

Aerospace Technology News

Aerospace: The Future News

Picture(s) of the Month

Aviation Exploring is “Learning For Life sponsored by:
Somerset Air Service, Inc.

Somerset Airport @ George Walker Field
“A Field of Dreams”

P.O. Pox 1007, Bedminster, NJ 07921

908 722 2444 / info@somersetairport.com / <http://www.somersetairport.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, on a monthly basis. The AEP107 Flight Logs are also posted on our website: 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](#) (activities scheduled to date)

APRIL 2008

THU	3	7:30 PM	Business Meeting → April Activities → Summer Trip	Ian	SMQ Office
THU	10	7:30 PM	Aerospace Presentation No Planned Activity	Brian	
THU	17	7:30 PM	Aerospace Presentation No Planned Activity	Brian	
THU	24	7:30 PM	Aerospace Presentation No Planned Activity	Brian	

UP AND COMING EVENTS [Return to Contents](#)

→ EAA AirVenture 2008 - JULY 28 - AUGUST 3, 2008

Gotta Get to Oshkosh!

<http://www.airventure.org/>

→ **The World's Greatest Aviation Celebration brings together entire flight community**

There is just one event that embodies all the spirit, enthusiasm and innovation within aviation. Preparations for that event, EAA AirVenture Oshkosh - The World's Greatest Aviation Celebration - are under way once again as EAA's 56th annual fly-in convention will be held at Wittman Regional Airport in Oshkosh on July 28-August 3, 2008.

→ **Your Turn in Space:**

Virgin Galactic Will Highlight the Possibilities at EAA AirVenture Oshkosh 2008

The unveiling of Virgin Galactic's SpaceShipTwo and WhiteKnightTwo in the past week brought the world's attention back to the potential of space tourism. One of the first places where the public will be able to discover more about the possibilities will be at EAA AirVenture Oshkosh,

**AVIATION EXPLORING POST 107
FLIGHT LOG – MAR 2008**

"The World's Greatest Aviation Celebration," coming July 28-August 3 at Wittman Regional Airport in Oshkosh.

- ➔ **Raritan Valley- Aviation Merit Badge Event 2008, SAT, MAY 3, Sky Manor Airport, Pittstown, NJ**
- ➔ **C5 Simulator Tour**
- ➔ **May 16 -- Kean College Expo** --target audience =education's "mover & shakers" (Submitted by: Mary Lou Dordan, Aviation & Space Education / Community Outreach Program Manager, FAA William J. Hughes Technical Center mary.lou.dordan@faa.gov)
- ➔ **June 10-12 -- Air Traffic Control Assoc. Symposium** in Atlantic City (one day during this symposium will be dedicated to high school age youth who will be invited to visit the Tech Center and attend the Symposium exhibit area in Atlantic City where they can talk with reps from various aviation/aerospace industry reps--probably the 11th) (Submitted by: Mary Lou Dordan, Aviation & Space Education / Community Outreach Program Manager, FAA William J. Hughes Technical Center)
- ➔ **July 8-August 7 -- Garret A. Morgan Technology & Transportation Education Program** -- High School Scholars Program--Rowan University (open to high school students. Is a four-week, internship program offering high school students transportation research experience, seminars, and field trips to introduce them to the many aspects of the complex field of transportation. Each student will receive a \$1500 stipend, transportation will be provided, students will work on research with a professor, etc.) More info can be found at <http://users.rowan.edu/~jahan/GAMTTEP/> (Submitted by: Mary Lou Dordan, Aviation & Space Education / Community Outreach Program Manager, FAA William J. Hughes Technical Center)
- ➔ **June 25-27 -- Careers in Aviation (CIA) Academy at the William J. Hughes Technical -- for educators and guidance counselors.** (Submitted by: Mary Lou Dordan, Aviation & Space Education / Community Outreach Program Manager, FAA William J. Hughes Technical Center)

A **Careers in Aviation Academy** for educators and guidance counselors will be held **June 25-27**. The National Talent Network (NTN), a gifted and talented service of the Educational Information and Resource Center (EIRC) and its partner, the Federal Aviation Administration (FAA) William J. Hughes Technical Center Aviation and Space Education Program, will conduct the event. The fee is \$200 per person, including professional development credit for three full days. The Aviation Academy will be held at the FAA William J. Hughes Technical Center located at the Atlantic City International Airport.
- ➔ **July 14-18 -- Careers in Aviation (CIA) Academy at the William J. Hughes Technical Center for middle school and high school students.** (Submitted by: Mary Lou Dordan, Aviation & Space Education / Community Outreach Program Manager, FAA William J. Hughes Technical Center)

NTN/EIRC will hold its **Second Annual Careers in Aviation Academy for Youth, grades 6-12, July 14-18** (\$200 per youth). Events planned for these academies include tours, lectures, and hand-on opportunities, so participants can learn more about careers in aviation and the key role air transportation plays in improving the economic and social life of all Americans. The Aviation Academy will be held at the FAA William J. Hughes Technical Center located at the Atlantic City International Airport.
- ➔ **AEP Annual Dinner 2008, DEC**

**AVIATION EXPLORING POST 107
FLIGHT LOG – MAR 2008**

CLASSIFIEDS [Return to Contents](#)

AEP107 INVITES NEW MEMBERS TO JOIN

Aviation Exploring Post 107 always welcomes new members! We are coed, ages 14 through 20 and focused on "Aerospace Education and Youth Development". We have a very active aerospace program that networks our members within the aerospace community. For additional information, please contact: Tom Teel, 908 581 6876, chairman@aep107.org, www.aep107.org .

SOMERSET SOARING VENTURES, INC. <http://www.somersetsoaring.com>

AEP107 Members, if you wish to be a volunteer Wing Walker for FFF, Inc., please contact Jay Hahola at the glider line on **SAT, 11:00 AM** weather permitting. Jay would like to meet you personally.

**JANUARY 2008 AEROSPACE PROGRAM
- COMPLETED ACTIVITIES** [Return to Contents](#)

AVIATION EXPLORING – NATIONAL WEBSITE

<http://www.learning-for-life.org/exploring/aviation/index.html>

NOTE: The AEP107 Flight Logs are posted on the Learning For Life – AVIATION website. (URL shown above)

AEP107 MEMBER AND ALUMNI NEWS [Return to Contents](#)

No submissions this month.

AEROSPACE EMPLOYMENT INFORMATION [Return to Contents](#)

Aerospace engineer incentive bills passed

By [D.R. STEWART World Staff Writer](#), 3/7/2008

Legislation that would provide tax credits to attract engineers to Oklahoma aerospace companies and retain them has been passed by the state House of Representatives and the Senate.

Both bills, House Bill 3239 and Senate Bill 1171, were passed by their respective chambers Wednesday and will be considered by the other legislative bodies in the next two weeks, officials said.

HB 3239, sponsored by Rep. Skye McNeil, R-Bristow, grants engineers hired by an Oklahoma aerospace company after Jan. 1, 2009, a tax credit of up to \$5,000 per year for up to five years.

The bill also allows aerospace companies a tax credit of 10 percent for compensation paid to a qualified engineering graduate during the first five years of his or her employment if the employee graduated from an Oklahoma college or university. A company could get a tax credit of 5 percent if the employee graduated from an out-of-state college or university.

U.S. Department of Labor-led taskforce releases report on aerospace workforce

On March 19, 2008, The Interagency Aerospace Revitalization Taskforce, led by the U.S. Department of Labor, released the first of five annual reports to Congress. [Click here](#) for the press release. [Click here](#) for the report.

Good jobs vanish for workers with less education

http://www.twincities.com/cj_8659976

Recession likely to hit blue-collar jobs hardest

By Tony Pugh, McClatchy Newspapers, [Article Last Updated: 03/22/2008 10:32:54 PM CDT](#)

AVIATION EXPLORING POST 107 FLIGHT LOG – MAR 2008

WASHINGTON — The steady loss of "good jobs" by less-educated workers has left them more vulnerable to recession than at any time in nearly 30 years, and signs are mounting that a recession is either already here or coming soon.

High school dropouts and even high school graduates who lack specialized job training have seen their already limited employment prospects steadily decline during America's decades-long shift from a manufacturing-based economy to a service economy.

Sky-high luxury made in Tucson

<http://www.azstarnet.com/business/231567>

By Michelli Murphy, ARIZONA DAILY STAR, Tucson, Arizona | Published: 03.27.2008

Employment at B/E Aerospace Inc. has soared while the local manufacturer of aircraft interior products works to turn first-class cabins into airborne hotels.

In just over four years, the company has grown from about 45 to 450 employees in its 900,000-square-foot facility at 1851 S. Pantano Road.

AEROSPACE BUSINESS NEWS [Return to Contents](#)

Smart Glass Company Research Frontiers Licenses GKN Aerospace Transparency Systems to Offer SPD-Smart Armored Glass for Vehicles

GARDEN GROVE, Calif. & WOODBURY, N.Y.--([BUSINESS WIRE](#))--GKN Aerospace Transparency Systems Inc. has acquired a license from Research Frontiers Inc. (Nasdaq: REFR), the developer and licensor of SPD-Smart™ light-control film technology. The license grants GKN Aerospace the right to manufacture and offer armored SPD-SmartGlass™ products utilizing Research Frontiers' patented light-control technology for armored transportation vehicles. The fees and minimum annual royalties payable to Research Frontiers and other license terms were not disclosed.

Textron Named FORTUNE Magazine's Most Admired Aerospace & Defense Company in 2008

<http://newsticker.welt.de/index.php?channel=fin&module=smarthouse&id=688867>

Textron Inc. (NYSE: TXT) announced today that it has been ranked number one on FORTUNE magazine's list of America's Most Admired Companies in the Aerospace & Defense category, up six spots from its number seven ranking last year. This is Textron's fifteenth consecutive year to be ranked in the list of FORTUNE's Most Admired Companies. "Textron is honored to be recognized as number one among such worthy peers in FORTUNE's Most Admired Aerospace & Defense category," said Textron Chairman, President and CEO Lewis B. Campbell. "Earning this type of recognition is a tribute, first and foremost, to the talented people across Textron, whose dedication, commitment and desire to perform for their customers and for their business is nothing short of passionate."

The Financial State of the Airline Industry

US Senate Committee ON Commerce, Science and Transportation
Aviation Operations, Safety, and Security Subcommittee
Thursday, March 13, 2008, 10:00 AM, SR - 253

After posting nearly \$35 billion in cumulative net losses from 2001 through 2005, U.S. air carriers have been able to return to profitability over the past two years. Domestic airlines earned an estimated net profit of roughly \$3.5 billion last year, slightly more than the \$3.0 billion in net profits achieved in 2006. Despite this success, air carriers continue to face significant challenges, including high fuel prices, growing competition, and severe congestion and delay problems. This hearing will examine the state of the airline industry with a focus on both the current financial state and long-term economic outlook of domestic air carriers and their workforce.

AVIATION EXPLORING POST 107 FLIGHT LOG – MAR 2008

Air confusion: Near or far?

By Staff and Wire reports, Published: Friday, March 7, 2008 10:10 PM EST

OBERLIN, OHIO — The Federal Aviation Administration downplayed an incident involving two airplanes over Somerset County, accusing the air traffic controllers union of “needlessly scaring and terrorizing the public” by characterizing it as a near miss to promote their own labor agenda.

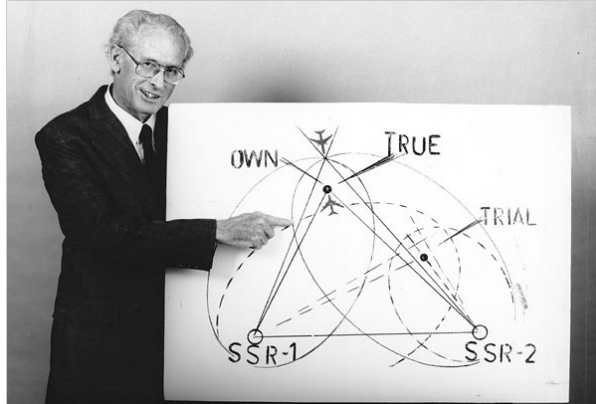
Two airplanes with more than 100 passengers averted a collision in air east of Pittsburgh after an Ohio air traffic control trainee told a Delta Air Lines pilot to turn into the path of an oncoming PSA Airlines plane, officials said.

One pilot flew up and the other went down, and the planes never came closer than about 400 feet in altitude and three miles in lateral separation, FAA spokeswoman Elizabeth Isham Cory said Thursday. Standard separation is 1,000 feet vertical and five miles lateral, Cory said.

Liberia's pygmy hippos survive two civil wars 8:06pm EDT

LONDON (Reuters) - Rare pygmy hippos are surviving hidden in Liberia's forests against all the odds, despite two civil wars that have ravaged their habitat, British scientists said on Monday.

George B. Litchford Sr., 89, Aviation Inventor, Is Dead



George B. Litchford Sr., explaining his warning system in 1988.

By [MATTHEW L. WALD](#), NY Times, March 10, 2008

George B. Litchford Sr., a prolific aviation inventor who had a vital role in the development of the collision warning system now used on every airliner in the United States, died on Feb. 28 in Albany. He was 89 and had lived most of his life in Northport, N.Y.

Mr. Litchford began working in navigation and surveillance technologies for airplanes in 1941 at Sperry Gyroscope Research Labs and was still at it 50

years later. One of his insights was that hardware already on planes that help controllers on the ground keep track of them could also be used in an anticollision system.


Boeing, in Contract Protest, Cites Changes to Air Tanker

By [JEFF BAILEY](#), Published: March 12, 2008, NY Times

CHICAGO — [Boeing](#) filed a formal protest on Tuesday seeking to overturn the Air Force's award of a \$35 billion contract to build aerial-refueling planes to a team that includes its European rival, [Airbus](#). It said that the military had changed specifications to accommodate the bigger Airbus plane.

FAA and Southwest Airlines Accused of Falsifying Safety Reports

<http://blog.wired.com/27bstroke6/2008/03/congress-faa-an.html>

By Kim Zetter  March 11, 2008 | 6:33



The Federal Aviation Administration **and** Southwest Airlines **are** being accused of falsifying a safety report that provided assurances that the airline had met compliance rules for safety inspections of its jets, according to documents released today by a U.S. House Committee that is investigating claims made by two FAA whistleblowers. Information in the **document cites cronyism** as the cause of the falsification and the FAA's failure to properly do its job in conducting oversight of Southwest and other airlines.

This comes on the tail of news released two weeks ago that the **FAA also allowed substandard parts** that are critical to the safety of commercial and military planes to enter the aviation supply chain because it failed to provide proper oversight of the parts suppliers.

AVIATION EXPLORING POST 107 FLIGHT LOG – MAR 2008

Some question FAA's oversight strategy in light of Southwest incident

<http://www.dallasnews.com/sharedcontent/dws/bus/stories/031608dnbusFAAfolo.3a08159.html>

Southwest incident exposed flaws with approach that relies on airlines, critics say
11:15 PM CDT on Saturday, March 15, 2008, By DAVE MICHAELS and TERRY MAXON / The Dallas Morning News , dmichaels@dallasnews.com; tmaxon@dallasnews.com

Air traffic system overhaul stuck in holding pattern

Disagreement over how to fund it far from resolution

By MARILYN GEEWAX, Cox News Service, March 15, 2008, 10:39PM

WASHINGTON — Last year, Sen. Jay Rockefeller was promising to avert "an impending crisis" by funding a replacement for the nation's outdated air-traffic control system.

Today, hope is nearly gone for the West Virginia Democrat's legislation to reauthorize the Federal Aviation Administration's budget and raise new revenues for the satellite-based Next Generation Air Transportation System, or NextGen.

Delta Air Lines chief executive Richard Anderson, speaking at an FAA event last week, expressed the airline industry's disappointment, saying Congress lacks the "political will" to act. "It doesn't look like we're going to make a lot of progress on FAA reauthorization," he said.

Dassault Chairman: Dollar Level Unbearable For French Aerospace

Dassault Aviation, Tuesday March 18th, 2008 / 10h44

PARIS - (Dow Jones)- The dollar has sunk to a level against the euro that is unbearable for the French aerospace industry, and the only solution remaining for the sector is to shift production into non-euro or low-cost countries, a senior industry executive said Tuesday.

As Southwest grounds planes, calls rise for FAA overhaul

Critics say that FAA inspectors cut airlines too much slack.

BY ALEXANDRA MARKS The Christian Science Monitor, March 18, 2008

New York -- Calls are increasing for an overhaul of the Federal Aviation Administration, after Southwest Airlines this week grounded about 40 planes because of maintenance concerns.

For years, the FAA has been accused of being "too cozy" with the airlines it is charged with regulating. It even routinely refers to them as "customers," according to aviation watchdogs.

Andrews Space among moon ship consultants Picked to evaluate lander design

http://seattlepi.nwsourc.com/business/355353_nasaaward18.html

By [JAMES WALLACE](#), P-I AEROSPACE REPORTER

NASA has picked its early industry partners to help with the preliminary design of a spacecraft that it hopes will land four astronauts on the moon by 2020. They were the usual suspects -- The Boeing Co., Lockheed Martin, Northrop Grumman. And Andrews Space of Seattle. Who?

Although Andrews Space does not have the name recognition of the big three U.S. defense and space contractors, the privately held Seattle-based company has made a name for itself in some circles since it was founded in 1999 to be a catalyst in the commercialization and development of space.

Court Strikes Down State Law Protecting Fliers

<http://www.nytimes.com/2008/03/26/nyregion/26passenger.html?ref=business>

By [KEN BELSON](#), NY Times, Published: March 26, 2008

A federal appellate court on Tuesday rejected [New York State's](#) attempt to penalize airlines for not providing adequate services to passengers trapped on planes at airports for more than three hours. The ruling is likely to discourage other states, including California, that had been considering following New York's lead in enacting an Airline Passenger Bill of Rights. But it could also spur Congress to pass a bill that would supersede any state law.

[Woman Pilots Add to U-2's History](#), Today, March 30, 2008, 12:56:03 PM

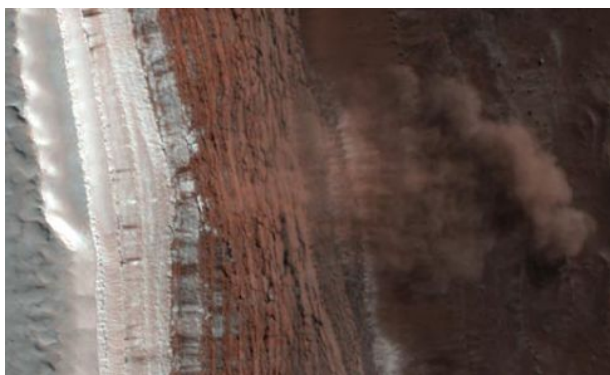
AVIATION EXPLORING POST 107 FLIGHT LOG – MAR 2008

In its 50 years of flight, only six women have flown the U-2 'Dragon Lady.' Three of those six are currently in the Air Force, and two of those three are currently fighting in operations Enduring Freedom and Iraqi Freedom with the 380th Air Expeditionary Wing's 99th Expeditionary Reconnaissance Squadron, the only U-2 squadron in U.S. Central Command's area of responsibility.

[Boeing, Textron get \\$10.4 billion V-22 aircraft award](#), Today, March 30, 2008, 12 hours ago 03/29/2008 WASHINGTON -- Boeing Co. and Textron Inc. received a \$10.4 billion contract for the V-22 Osprey that ensures production of 167 more of the aircraft through 2012, the Pentagon said Friday. The multiyear contract will save the military a...

AEROSPACE TECHNOLOGY NEWS [Return to Contents](#)

FIRST-EVER PHOTOS OF AVALANCHES ON MARS



An accidental shot reveals the active Martian landscape

By Gregory Mone Posted 03.04.2008 at 11:53 am

Mars Avalanches: Photo by NASA/JPL-Caltech/University of Arizona

Yesterday, [NASA released](#) more than two thousand images from the high-resolution camera onboard the Mars Reconnaissance Orbiter, a spacecraft looping around the Red Planet. One of the highlight photos, taken February 19, shows the cloudy aftermath of an avalanche of ice and dust rushing down a steep

slope. The image surprised scientists, and proved that Mars is not just some planet-sized museum, but a very active world. For more images from the spacecraft's high-res camera, [check here](#).

[CESSNA CITATION COLUMBUS TO FEATURE PARKER FLY BY WIRE SYSTEM](#)



Wichita, Kan., March 6, 2008 – Cessna Aircraft Company, a Textron Inc. (NYSE: TXT) company, has selected Parker Aerospace's Control Systems Division to supply the powered flight control system for the Model 850 Citation Columbus

The new large cabin Citation is the first aircraft in the Citation family to be equipped with a hybrid fly-by-wire flight control system developed by

Cessna which works with conventional hydraulic actuation to enhance the safety and performance capabilities of the Columbus

F.A.A. Wants Stoplights Added to Runways

<http://www.nytimes.com/2008/03/26/business/26runway.html?ref=business>

By [MATTHEW L. WALD](#), NY Times, Published: March 26, 2008

WASHINGTON — The Federal Aviation Administration will add a runway version of traffic signals at 20 busy airports in the next three and a half years, the agency said Monday. The signals are part of a program to keep taxiing airplanes or vehicles from intruding on runways where other planes are taking off and landing.

Reducing runway incursions has been a difficult problem for the [F.A.A.](#) as the tempo of airport operations has increased.

AVIATION EXPLORING POST 107 FLIGHT LOG – MAR 2008

Fake Diamonds are a Turbofan's Best Friend

<http://www.popsci.com/military-aviation-space/article/2008-03/fake-diamonds-are-turbofans-best-friend>

By Matt Ransford Posted 03.20.2008 at 3:31 pm, Popular Science Magazine

Kids aren't the only ones who think fake diamonds are hot. Engineers at Ohio State University are using zirconium dioxide (the ceramic from which we get synthetic diamonds) to protect jet engines from high-temperature corrosion.

The fan blades in modern aircraft engines are coated with a protective ceramic to keep them from overheating. When the metal heats up, it expands, and the ceramic coating expands with it. But when grains of sand are inevitably sucked in and contact the many thousand-degree blades, they melt and make glass. The glass not only breaks down the coating when hot, but when it cools, it forms an inelastic layer on top of the protective coating. When the blades heat up again, the glass doesn't expand and breaks off the ceramic, shortening the life of the engine

AEROSPACE – THE FUTURE NEWS [Return to Contents](#)

China to launch 1st jumbo aircraft company in Shanghai in near future

www.chinaview.cn 2008-03-06 20:25:00

[Special Report: NPC, CPPCC Annual Sessions 2008](#)

BEIJING, March 6 (Xinhua) -- China will soon establish its first jumbo passenger aircraft company in Shanghai to realize its longtime dream of producing such planes, lawmakers and political advisors said Thursday.

The Shanghai government, aviation companies and some other state-owned enterprises will jointly invest in and establish the jumbo plane company under the guidance of the central government, said Jin Xingming, a deputy to the National People's Congress (NPC), or the parliament, on the sidelines of the ongoing NPC session.

Continental, Boeing and GE plans for Sustainable Biofuels Flight

<http://www.boarding.no/art.asp?id=30706>

Continental Airlines, Boeing and GE Aviation have announced plans to conduct a biofuels demonstration flight in the first half of 2009 in an effort to identify sustainable fuel solutions for the aviation industry. Continental is the first major U.S. carrier to announce plans to highlight technological advancements in sustainable biofuels that can help to further reduce carbon emissions.

DARPA'S NEW GOAL: A PLANE THAT FLIES FOR FIVE YEARS



The agency is set to announce contracts for the program soon. By Seth Fletcher Posted 03.06.2008 at 12:26 pm, Popular Science

NASA long-endurance plane concept: Photo by NASA

The highest-endurance aircraft currently flying is Northrop Grumman's Global Hawk UAV, which can stay aloft for up to 40 hours. Now Darpa—which, to its credit, is never short on outlandish ideas—wants to beat that endurance record more than 1,000 times. The goal of Darpa's recently launched [Vulture Program](#) is to build a kind of atmospheric satellite that can stay aloft for five years at a time with little or no maintenance.

It must be able to haul a 1,0000-pound payload all the while, and operate at an altitude of 60,000 to 90,000 feet. How does one power a plane that's going to fly for five years? Solar seems to be the most logical option, though fuel cells could work, too. It's not clear what shape the craft could take, though the NASA ultra-endurance concept aircraft pictured here could give some hints. Darpa says it's close to awarding contracts; then phase one of the three-part program, which will focus on figuring out what this kind of plane might actually look like, can begin. Once someone has built a

**AVIATION EXPLORING POST 107
FLIGHT LOG – MAR 2008**

full-scale demonstrator that can stay in the air for 12 months, a Vulture program aircraft will enter production.

SCIENTISTS UNVEIL THE WORLD'S LARGEST SHEET OF CARBON NANOTUBES



The biggest sheet of nanotubing holds promise, but is it strong enough to one day lift a space elevator?

By Nicole Dyer Posted 02.28.2008 at 4:52 pm

BIG YET SMALL: Photo by Nanocomp Technologies, Inc

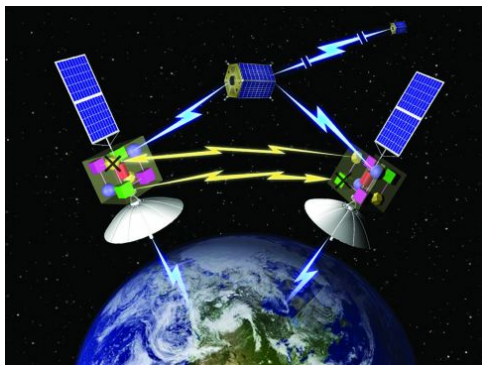
Nanocomp Technologies Inc. of Concord, New Hampshire has managed to make the largest sheet of carbon nanotubing ever, **rekindling the long-standing dream of a fantastical space elevator that lifts us into orbit** along an ultra-light yet

ultra-strong carbon nanotube cable. Sure, at 18 square feet, the sheet is smaller than a beach blanket but it **contains a billion billion nanotubes**, which makes it **200 times as strong as steel and 30 times less dense.**

Moreover, **it's flame retardant** and **conducts electricity**, which would make it useful in tiny electronic devices. Ironically, the problem with most carbon nanotubes is that they're *too* small, or rather, too short—on the order of tens of microns long. Short nanotubes are **difficult to incorporate into existing manufacturing processes** and lack the high performance properties of long carbon nanotubes. They also tend to be delivered in powder form (think of graphite pencils). By contrast, Nanocomp's tubes stretch a few millimeters and the sheets are specially treated to keep them from shedding black specks of carbon.

MODULAR SPACE SYSTEM

DARPA plans to test whether a group of mini-spacecraft can do the work of a larger satellite. By Dawn Stover Posted 03.05.2008 at 9:29 pm, Popular Science



System F6: System F6 spacecraft cluster Photo by DARPA

It's a name only a government agency could love: the Future, Fast, Flexible, Fractionated, Free-Flying Spacecraft United by Information eXchange. Could DARPA possibly come up with a more tortured title for System F6?

Still, the name says something about the concept: [using a team of small spacecraft](#) to do the work of a single (bigger, more expensive, more vulnerable, less capable) satellite. DARPA has been talking about spacecraft clusters for years, but now the agency is planning to put some money where its mouth is. Earlier this week, DARPA gave Boeing Advanced

Systems a \$12-million-plus contract to demonstrate initial technologies for the concept; an on-orbit demonstration is planned for 2011. For System F7, we hope DARPA will add a little Fun.

AVIATION EXPLORING POST 107 FLIGHT LOG – MAR 2008

Space planes 'to meet big demand'

<http://www.astrium.eads.net>

By Jonathan Amos, Science reporter, BBC News

Aerospace giant **EADS** says it will need a production line of rocket planes to satisfy the space tourism market. The European company's Astrium division, makers of the Ariane rocket, has plans for a commercial vehicle to take ticketed passengers above 100km. Its market assessment suggests there would be 15,000 people a year prepared to part with some 200,000 euros (£160,000) for the ride of a lifetime.

GE Aviation, Rolls-Royce complete testing phase for F136 engine

Business Courier of Cincinnati, Friday, March 21, 2008 - 9:54 AM EDT



The F136 engine being developed by **GE Aviation** and **Rolls-Royce** for the U.S. Joint Strike Fighter (F-35) program, has moved another step toward production, the companies said.

The engine passed a high-altitude, afterburner testing program at the U.S. Air Force Arnold Engineering Development Center in Tennessee, according to a news release. A second engine is continuing a testing program at GE's test facility in Peebles, Ohio.

GE Aviation and Rolls-Royce are developing the engine as an alternative to another F-35 engine being built by Pratt & Whitney.

Pratt & Whitney F135-PW-100 Augmented Turbofan



While the General Electric GE90 sets the standard for gas turbine engines in the field of commercial airliners, the **Pratt & Whitney F135 Augmented Turbofan engine is the benchmark fighter engine of today.** The F135 is a development of the P&W F119-PW-100, which was developed by Pratt & Whitney for the twin engine Boeing/Lockheed F/A-22 Raptor. For the military Joint

Strike Fighter program, an even more powerful and reliable version of the F119 was developed for what is now going into production as the lower cost F35 Joint Strike Fighter.

NASA Elated by Orbital Putty

By JOHN SCHWARTZ, March 21, 2008, 12:17 pm

NASA mission managers were ebullient over a test late on Thursday of techniques to repair delicate tiles on shuttles with a kind of orbital caulk gun.

The test, which took place during a six-and-a-half hour spacewalk, was "a huge success," said Zebulon C. Scoville, the lead spacewalk planner for the Johnson Space Center. "We're just thrilled with the way it turned out."

XCOR Unveils New Suborbital Rocketship



By Leonard David, SPACE.com, 26 March 08, 03:01 am ET

GOLDEN, Colo. — XCOR Aerospace of Mojave, Calif. unveiled plans today for a new entry in the suborbital spaceship business — a rocket-powered space plane to be known as the Lynx.

The Lynx is being designed to carry a pilot and a passenger or payload on flights into suborbital space. Company officials are eyeing 2010 as the date for the inaugural launch of the vehicle.

VIDEO: XCOR's Methane Rocket Engine

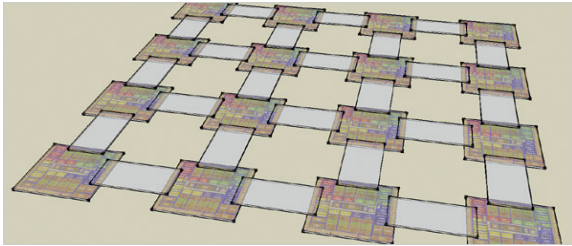
Future of Flight: Space Tourism, Investment and Technology

VIDEO: SpaceShipTwo Revealed: Suborbital Spaceliner for Virgin Galactic

AVIATION EXPLORING POST 107 FLIGHT LOG – MAR 2008

Replacing Wire With Laser, Sun Tries to Speed Up Data

<http://www.nytimes.com/2008/03/24/technology/24wafer.html?ref=technology>



Sun Microsystems is gambling on using beams of light to connect processor chips, eliminating a bottleneck.

By JOHN MARKOFF, Published: March 24, 2008

[Sun Microsystems](#) is trying to do for computing what all the king's horses and men failed to do for Humpty Dumpty. For decades, the semiconductor industry has broken silicon wafers into smaller chips to improve manufacturing yields.

Now Sun has found a way to reconnect the chips so they can communicate with each other at such high speeds that computer designers can build a new generation of computers that are faster, more energy-efficient and more compact.

PICTURE(S) OF THE MONTH [Return to Contents](#)

Killer Bee UAV First Look: Raytheon Fights Boeing in Drone Race

And you thought the Air Force's bidding war on tankers [was ugly](#). As the U.S. Navy and Marine Corps look to increase their fleets of small, unmanned aircraft that can serve as communication relays and sensor platforms, they're seeing contenders in the fight over which company gets to build them.

