



The Bend High Desert Flyer of Chapter 1345

WEBSITE: <http://www.eaa1345.org/>

KBDN AWOS 134.425

MAY 2011, VOL10, #5

PREZ SEZ:

Thinking BIG is simply the practice of setting a very high goal and having the belief that it can be achieved. This is where many great things come to life.

Burt Rutan has captured our attention with the amazing array of aircraft he's designed, and also with his mindset. He changed the thinking about what was possible. He pioneered and promoted that an airplane could be quickly designed and built using inexpensive materials in your garage and came up with popular designs like the Long EZ. Building on his early successes, he built the Voyager, which flew non-stop around the world. He's living proof of what can be accomplished with Thinking BIG combined with a lot of competence and hard work.

The SR-71 is another product of Thinking BIG. Designed and built in the 1960's at Lockheed Skunkworks under the direction of Kelly Johnson, the SR-71 is still the fastest jet-powered airplane I know of and one of my personal favorites to see and watch. I was fascinated to see it fly at Oshkosh many years ago and then again at Edwards AFB when it passed over at Mach 3.5!

Perhaps the best story to illustrate the power of Thinking BIG was the race to land a man on the moon. It all began with President Kennedy's goal of landing a man on the moon before the end of the decade and bringing him safely back to Earth. It could not have happened as quickly and likely may not have happened at all without that initial goal which inspired the nation to dedicate the resources and energy to making it a reality.

While Thinking Big is just the beginning stage, it's critical to set the target for your eventual outcome. Once a compelling target is set, then you can get to work applying your skills, expertise and hard work to realize your goal or dream.

So ask yourself...is there something you want to do or accomplish? Perhaps you always wanted to design or build an airplane? Perhaps you want to learn to fly or get another rating? Perhaps you want to fly across the country or land on a backcountry strip. Thinking BIG or thinking small is your choice. You have the opportunity to inspire not only yourself, but others too. And who knows, you might just have some fun in the process! Take a few minutes to daydream of the people, airplanes and achievements in aviation that have most captured your imagination and admiration over the years. For me, its people like Burt Rutan, airplanes like the SR-71 and Voyager and achievements like landing a man on the moon that come to mind. This is a very short list and I'm sure you could write a book with all the amazing success stories in the last 100+ years since powered flight began. In every case, there is one common principle of thinking which has made them all great. That principle is the Magic of Thinking BIG!

Will this be the next 'BIG' thing?

World's First Air-Powered Car: Zero Emissions by Next Summer



This six-seater taxi, which should be available in India next year, is powered entirely by a tank filled with compressed air.

Tata Motors of India is ready to introduce Air Car - taking **giant** strides and making history for itself. First the Land Rover/Jaguar deal, then the world's cheapest car, and now it is also set to introduce a car that runs on compressed air.

Next meeting:

Hello all,

Our next meeting of EAA 1345 will be held at the Bend Airports "Electronics International"!

"EI" is located on the North West side of the Bend airport. Our gathering time is Wednesday May 11th @ 6pm with the meeting starting around 6:30pm. Food and drinks will be provided by EI so be sure to thank them for their gracious hospitality! I'm looking forward to a great turn out, see you there.

Thomas Phy, Vice-president

Treasurer's Report

Financial for period 1/1/11 through 4/30/11

Total Income:	\$440.00
Total Expense:	\$401.49
Net Income (Loss)	\$38.51
Cash Balance:	\$2107.91
Accounts Receivable:	\$400.00 (2011 dues)

Dues for 2011 are now past due!

Please mail your checks in the amount \$20.00, payable to EAA Chapter 1345 to: John S. Watson, 61895 Bunker Hill Ct., Bend, OR 97702

Jack Watson, Treasurer

April meeting minutes

Minutes of a regular meeting of The Chapter, held at the Ellsberg Hangar on Wednesday, April 13, 2011.

CALL TO ORDER

President Sean Harbison called the meeting to order at 6:44 p.m.

INTRODUCTIONS

There were 11 members present and six guests. Those in attendance were Sean Harbison, Tom Phy, Erik Rustand, Mike Bond, Bruce Myers, Mike Pederson, Brad Stankey, Bud Candland, Jeff Witwer and Molly Johnson. Guests attending were Jim Mateski, Randy Shield, Dick Lowell, Eric Simpkins and Devin Simpkins. The guest speaker for the night was Joe Wanko from Precise Flight.

ANNOUNCEMENTS

No immediate announcements were made.

APPROVAL OF MINUTES

Sean Harbison asked for an approval of the minutes (as published in the newsletter) from the last (February) meeting as published. It was seconded by Brad Stankey and unanimously approved.

TREASURER'S REPORT

Sean Harbison asked for an approval of the treasurer's report as published in the January newsletter. It was seconded and unanimously approved.

OTHER COMMITTEE REPORTS

No committee reports.

OLD BUSINESS

Bruce Myers announced that his new prop (pitch controlled electrically) was performing well and he was enjoying his new performance.

NEW BUSINESS

Bud Candland talked about Young Eagles and what involvement chapter 1345 was willing to partake in. Brad Stankey volunteered to give some rides when the time comes. Thanks Brad for your offer!

Sean Harbison announced the upcoming Hayward Air Rally. This will be the 47th annual event held on June 10-11, which will begin in Hayward, go through Redding and then on to Bend. This rally is a 500-mile VFR cross-country challenge. It is not a race but rather a fuel management and navigation event. The awards night will take place at the Bend Shilo Inn on June 11 from 5:30 p.m. - 9:00 p.m.

Dick Lowell from the CAP talked about Page Westoby from Bend. She has been selected for a fully paid scholarship, which will include round-trip airfare to the EAA Air Academy for the summer 2011 program. The Redding EAA Chapter 157, Corning EAA Chapter 1148 and the Hayward VAA Chapter 29 have all donated to these scholarships. The Bend Chapter 1345 is planning on recognizing her at the May meeting and provide a free membership to EAA 1345 as well as work on putting together an article for the local paper and news. Mike Bond volunteered to work on this project...thanks Mike!!

Sean brought up Dean Billings outstanding efforts involving auto gas and avgas and his efforts to inform all pilots of the concerns regarding aviation fuels and also possible articles for the local paper and news.

April minutes -- continued

Sean volunteered to work on this...thanks Sean!

ADJOURNMENT

The meeting was adjourned at 7:05 p.m.

PROGRAM

The program for the evening was a presentation given by Joe Wanko. Joe gave a wonderful PowerPoint presentation on Precise Flight's history and products that they offer. There were also videos included in the presentation that showed the effectiveness of the pulse light systems. Precise Flight is located at the Bend Airport and has been in business for 30 years. They design and manufacture pulse light systems, oxygen systems and speed brake systems. Thanks Joe for a great presentation!

RAFFLE

No raffle drawing was held.

Erik Rustand, Secretary

Turbine-powered Zenith CH701



This is Scott Ehni's custom Zenith CH701 airplane (that he scratch-built from plans) powered by the lightweight Garrett JFS 100-13A Turbo shaft engine, putting out at least 90 BHP at a prop speed of 3,100 rpm and burning about 12 gph. The small APU works on almost any liquid that will burn. The best off-airport fuel choice is a mix of diesel and unleaded regular gas, as it burns a bit cleaner.

<http://www.zenithair.com/misc/turbine-power.html>

(Also sounds great on YouTube)

\$400 Chinese Homebuilt Tri-Motor



Ding Shilu is an automobile mechanic in China. His 285-pound, three-engine homebuilt aircraft incorporates a short span, low aspect ratio, deeply cambered, flat-bottom wing with flat ailerons trailing behind the inboard portions of the trailing edge. Nearly two dimensional tail surfaces attach to a truss structure extending behind the pilot's seat, which sits below the wing on tricycle gear.

Ahead of that, three motorbike engines each drive propellers through belt drives.

Materials reportedly include plastic sheet and tubing, and cost less than \$400.

There's no photographic evidence that the aircraft has actually flown but, if it hasn't, the pictures suggest it has come close.

2011 Hayward Air Rally

The 2011 Hayward Air Rally will be held June 9-11. The Rally is flown in two legs, HWD-RDD and RDD-BDN during one day on Friday. The on-course check points are announced at the briefing the day before the Rally. Trophies and cash prizes are awarded out to 10th place at the awards dinner on Saturday. There are lots of other merchandise prizes and special awards, too.

This event is NOT about speed - it is scored using your actual time and fuel compared to your pre-flight estimates. This is an opportunity to put your flight planning and navigation skills to the test. Plan the flight and fly the plan. Please visit the web site for full information including past courses, scoring method and results:

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

Please come with us from Hayward, CA to Bend, OR in June. Great people; great flying; great fun.

Tom Neale, aka Race 71

Perpetual Energy in Flight Dynamic and Regenerative Soaring –

Phil Barnes has an impressive set of credentials, and an even more impressive body of work. Having seen three of his presentations at the Experimental Soaring Association's Western Workshops, this writer can attest to the breadth and depth of his knowledge.

According to his biography, "Phil Barnes has a Master's Degree in Aerospace Engineering from Cal Poly Pomona and a Bachelor's Degree in Mechanical Engineering from the University of Arizona. He has 25-years of experience in the performance analysis and computer modeling of aerospace vehicles and subsystems at Northrop Grumman. Phil has authored technical papers on aerodynamics, gears, and flight mechanics."

He now has his own web site, How Flies the Albatross, where readers can interact with the flight of the albatross in simulated dynamic soaring conditions, with mathematical explanations of a very high order. Barnes took all the photographs of albatrosses in flight, which is another impressive facet of his abilities.

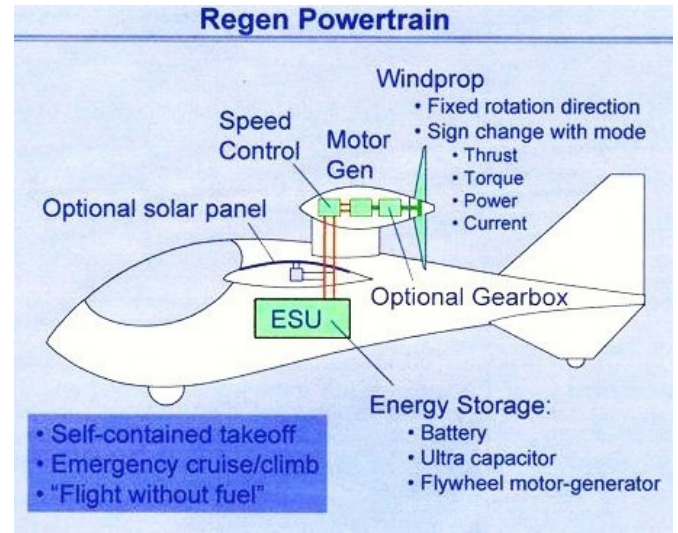
Another segment provides an "Aerodynamic and Artistic Study" of German jet fighters from World War II (still in draft form but pretty awe inspiring nonetheless), and a PowerPoint presentation on regenerative soaring, "Flight Without Fuel: Regenerative Soaring Theory."

Imagine a sailplane that self-launches using the battery power to its electric motor, but leaves its large propeller out in the breeze to regenerate energy and recharge itself.

At first glance this could be seen as another perpetual motion scheme, but Barnes provides a detailed mathematical proof that the sailplane could enjoy a net gain in energy during its flights, allowing unlimited time in the air. He adds a solar option that would further increase the utility of the craft.

Barnes draws on Hermann Glauert's seminal 1926 paper and Paul MacCready's 1998 presentation, which introduced the idea "with caution." Literally throwing caution to the winds, Barnes investigates the possibilities that Glauert called a "windmill on an aeroplane," and MacCready outlined as "regenerative soaring, where in concept, an aircraft would incorporate energy storage, a propeller, and a wind turbine, or dual-role machine thereof, to propel the aircraft and regenerate stored energy in updrafts."

Examining the dynamic soaring of the albatross, we can see the similarities to what Barnes has in mind, and the cross-currents of his thinking.



The idea of regeneration implies a motor/controller system that, like an electric car's regenerative braking, puts energy back into the batteries when the motor is not providing power for the airplane. It would also require a highly efficient regenerative mode.

He notes that solar panels collecting 150 Watts per square meter would allow extended flight, but only on an augmentation basis and not as a primary power source.

By Dean Sigler, <http://blog.cafefoundation.org/>

ED: I recommend Dean's [CAFE Foundation Blog](http://blog.cafefoundation.org/) ; much thought provoking aviation stuff!

Ride needed from Bend to Burns

My RV7A is in Burns, Oregon being painted. I am flying into Redmond and looking for a ride from there, back to Burns to pick it up. Date for completion is around May 11th. A bonus is you can see my newly painted airplane, and get a ride in it if you want.

C A Mansfield
RV33WE at gmail dot com
IO360, James cowl & plenum

ED: The above from member, Danny Sheridan

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