

CASCADE FLYER



Website: <http://co-opa.com/>

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President's Message:

Wow, I had no idea what complexities were hidden in the one page form we fill out for every flight medical we take. Thanks to our March speaker, Dr. Jerry Bass, I've had my eyes opened to a lot of the complexity and thought that is in that one page form.

Probably nothing is more important to a pilot than his medical and so the audience was enthralled all evening by the good doctors slide show. So much so that we did have much time to hear Dr. Bass talk much about his flying career. With luck we can have him back soon.

Be sure to drop in this month to see what Ed has cooked up for this time. Just like always, we'll meet for hanger talk at 6pm, our renowned pot-luck at 6:30pm and the formal program at 7pm.

Also be sure to keep 21 June open on your calendars. Butch Roberts and Professional Air will host another grand airport day for our flyout (fly-in?) enjoyment.. More details to follow.

Calendar:

17 April- Monthly Meeting
19 April- Monthly Flyout

8 May- Airport Safety Meeting
15 May- Monthly Meeting
17 May- Monthly Flyout

19 June- Monthly Meeting
21 June- Monthly Flyout (KBDN)
21 June- Airport Day, 8am until 2pm

17 July- Monthly Meeting
19 July- Monthly Flyout

Web doings:

I just took a peek at our membership list here:
<http://co-opa.com/members/members.html>

Looks like about half the gang has not paid up for 2008 dues. At \$10 a year the best deal in aviation. Students pilots are free. Contact Don Wilfong to get paid up.

Afterwards check out the other goodies on our web site:
<http://co-opa.com/>

To access the members only areas the username is "BDN" and the password is "123.0".

My Inbox:

What is sillier than applying for a federal \$600k earmark to study the need for a \$1.1M tower grant at KBDN? That is easy, as the Bend Bulletin informs us: it is missing the deadline for applying. Current estimates are that a tower would cost \$4M to build and \$400k/year to staff. Almost all of the building, and all of the yearly expense to be paid for by the City of Bend. Surely KBDN has much more pressing uses for that kind of cash.

The City of Bend needs to chat up Carrie Novick to see how these things are done; the right things done right. After years of her hard work and dogged persistence we now have something we can really use, working ATC radar in our area. Reports are that the radar is all the way to the ground at KRDM and below pattern altitude at KBDN. Just contact good old Seattle Center on 128.15 and give thanks to Carrie when they say those wonderful words back to you: "Radar Contact."

The ever-modest Carrie was quoted in the Bend Bulletin as saying "The only thing I can take credit for is being a nag". Maybe so, but she did that very well and that is what it took. Next time you see Carrie, give her a hearty "thanks" and a "well done" for good measure

My Inbox --- continued

Speaking of cash, that has always been in short supply at KBDN. One perennial problem is that while Deschutes County collects property taxes from property around the airport it is the City of Bend that sponsors and funds the airport. There is a fair solution finally in the works.

The County is looking to create a special property tax district around the airport so that improvements to the airport can be funded by taxes raised at the airport. As always the devil is in the details but we can keep our fingers crossed.

Random Thoughts:

Is there electricity in the air?

Gasoline is now at an all time high. Even adjusting for inflation. That hurts when we fill up the car, and hurts even more when we we fill up the airplane.

One solution to decrease the use of gas in cars has been to use hybrid engines. Hybrid engines use a gasoline engine and an electric motor together. When a hybrid car slows down, instead of wasting the energy of braking as heat, the electric motor is used as a generator and recaptures the braking energy in the batteries. When a hybrid car accelerates some of the energy in the battery is used to give the engine a boost.

This systems works well for a car, at least in the city, because a car spends much of its time accelerating and decelerating. In contrast an airplane engine is running at maximum continous power almost all the time so there is no advantage to using a hybrid engine in an airplane.

As the cost of gas has gone up and up, the cost of electricity has not been rising at the same rate. So it becomes natural that we would like to substitute the latter for the former. In some cases this make a lot of sense. Boeing has an active flight test program but the details are hard to find.



As some of you have seen, I have a new electric bike

If we analyze the economics of that we can get some ball-park figures for an imaginary electric airplane. My e-bike travels for about 40 miles on about a \$0.10 of electricity. By comparison a comparable gas bike might get 180mpg. With gas at \$3 a gallon that same 40 miles would cost \$0.66. That is a saving of almost 7x. If we could fly our airplanes (or drive our cars) for 1/7th of your current fuel costs we would be ecstatic!

Sadly the downside of electricity is the batteries you have to use. My electric bike should get 40 miles on a full charge, whereas the gas bike might get 180 miles on a full tank. When the gas bike is out of go juice a 10 minute stop at a gas station and you are ready to go again. The electric bike needs eight hours to recharge.

Who would want to convert their airplane to electricity, even with all the money you could potentially save, if you could only fly it for one quarter of its former range and with an eight-hour delay at each refueling stop?

If you have been following along closely you will now mention that I have been talking about good old lead acid batteries. What about fancier batteries like nickel metal hydride or lithium ion? Those may save you 20% in weight, add 20% in range, and may even recharge in an hour or two. Still it does not look like the performance would be good enough and the price would double that of lead acid.

This is why Boeing has been trying to put a hydrogen fuel cell in a test airplane instead of batteries. The idea is to use cheap electricity to make hydrogen out of water, then fuel your vehicle with it. A fuel cell in your vehicle turns the hydrogen back into electricity and uses that for power.

The good news is you can refuel your craft quickly, the bad news is the range will be less than if you used batteries. Hydrogen is a gas at room temperature so it is hard to carry enough around. Even if you could carry liquid hydrogen it still takes 2.9 times the weight, and 4.2 times the volume, to carry the equivalent energy of jet fuel. If I replaced my Cessna avgas tanks with hydrogen tanks of the same weight I would get just one third the range I have now. I just do not see this as ever being practical in a small airplane; unless, of course, we just run out of gas.



But wait; there is still hope for electric flying, if you are willing to adjust your idea of flying a bit:

Here is a neat electric ultralight:
<http://www.electraflyer.com/>.

Random Thoughts --- continued:

They claim you can get an hour or two of flight for \$0.60 of electricity. That looks like fun for a cheap weekend, just stay close to your home airport.

Better yet, how about an electric motor glider?



The Antares 20E makes sense to me. One battery charge could net you about 3 takeoffs to 3000 feet. Once you have some altitude just kill the motor and go find some thermals.

Check it out: <http://www.lange-flugzeugbau.com/>. Then click "English", "Products" and "Antares 20E".

Gary Miller

April Meeting: Program

Plan to attend the Thursday, April 17, 2008, Central Oregon - Oregon Pilots Assoc. meeting in the Bend Airport Flight Services Terminal Building at 6:00PM for a pot luck dinner and a very special program. Everyone is welcome!

Susan Palmeri, Bend Airport Manager, will give us the State of the Airport report. We are approaching the spring and summer construction season and have many things to look forward to. If we have time, there will be a video of Super Cubs flying in the Alaskan bush that is absolutely outrageous!!!

Shrug off those winter lows and come enjoy an aviation evening.

Don't miss this opportunity for a very entertaining and informative evening. Bring your friends for flying fellowship, fine food, and fabulous fun!!!

Ed Endsley

COOPA Program Chair
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March Fly-out.

Yes Mother Nature finally cooperated, providing a silky smooth day for our March 22 fly-out to John Day, Grant County Airport, which is no longer K5J0, has an AWOS and is now KGCD. Three planes, the Bond's and Dressler's Cardinal RGs and the Miller T210, made the one-hour (direct) trip each way.

Dave called ahead to insure a courtesy car would be available for the ride into town by the 6 people who made the trip

Due to the absence of our "Dawn" Patrol organizer (you and Norma were missed, Don), we made it a lunch fly-out. We all enjoyed a great meal at The Outpost Trading Co. and then wandered the city streets ...



Unfortunately, the Museum was closed

The reference to 'direct' flight above was to allow for the less-than-direct return by Gary and Dave, who with trigger-happy passengers, did some air-to-air photo-shoots:



Dave's Cardinal RG, courtesy of Ed Endsley

Let's hope for another cooperative weather opportunity,

Mike Bond

Special Notice:

BEND AIRPORT AIRSPACE SAFETY MEETING

Thursday, May 8, 2008 6-7:30 PM
Bend Municipal Airport - 63132 Powell
Butte Highway
Training Room (Upstairs next to
Professional Air FBO)

Anyone who has flown in our airspace recently has probably noticed that it can sometimes get pretty busy. You not only have to deal with local operations, including training activities, glider operations, and jet activity, you have to worry about other aircraft passing through our airspace who may not even be on our frequency. Please join us to discuss your concerns and learn more about what we can do to make our airport and our airspace a safer place to operate in.

The Redmond ATCT Manager will be here. (We are also trying to get someone from Seattle Center to attend.)

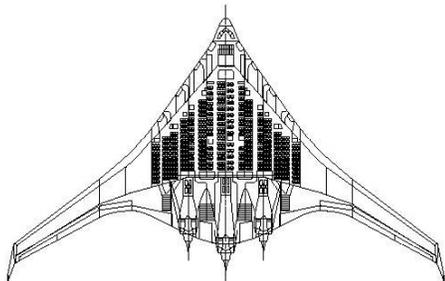
Please let me know if you have any specific items you would like me to add to the agenda.

Let's keep this airport as safe as it can be.

Thank you. Sue

Susan L. Palmeri, C.M.
Bend Airport Manager

**Boeing
797.
See next
column**



Editor's Note:

As you can see, Ed did not restrict his activities to just aerial photography the day of the last fly-out

Thoroughly Electric Gary!!!

President Gary Miller's new electric swift silver ship delivers about a mile per penny... I've driven it and can testify to the thoroughly terrifying task trying to turn tastefully throughout the trip... An offffiiiccer wouldn't have believed my sobriety.

What a great machine. Just a wonderful use of electrons for transportation.

Gary gave me a ride on the back across the airport and that was thrilling too. I think...
Terror affects my memory...

Ed Endsley



The Boeing 797 will be a 1000 passenger jet that could reshape the Air travel industry for the next 100 years. The radical Blended Wing design has been developed by Boeing in cooperation with the NASA Langley Research Center. The blended wing is expected to increase lift to drag ratio by an amazing 50%. The mammoth plane will have a wing span of 265 feet compared to the 747's 211 feet, and is designed to fit within the newly created terminals used for the 555 seat Airbus A380, which has a 262 feet span.

High body rigidity is a key factor in blended wing aircraft, reducing turbulence and stress on the air frame which adds to efficiency, giving the 797 a tremendous 8800 nautical mile range with its 1000 passengers flying comfortably at mach 0.88 or 654 mph cruise..

Hey ... it IS the April newsletter issue

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