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OCTOBER/NOVEMBER 2017

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Former US Airways pilot Chesley "Sully" Sullenberger, famously known for his successful landing of US Airways Flight 1549 on the Hudson River has spoken out against air traffic control privatization (H.R. 2997)—and he's asking fellow pilots to do the same.

With more than 50 years of industry experience, including general aviation, military, and airline, Sullenberger asserts that privatizing ATC "would allow a corporate monopoly to make decisions that put profits ahead of safety and would devastate rural communities," and believes that privatization would hand "control to the largest airlines, giving them the keys to the kingdom."

In July of this year, AOPA along with 130 other general aviation groups voiced their concerns against privatization and collectively agree that the private entity that would run the ATC system would be dominated by the airlines, and GA would not have a seat at the table.

Sullenberger supports those concerns in supportive ads he has created and concludes by stating that privatization is a "threat to our nation's security, safety, access, and basic fairness."

AOPA encourages all GA supporters to contact their representatives in Congress and help spread the word to fellow aviators about the threat ATC privatization poses to GA. To contact your representative directly, visit aopa.org/takeaction or call (855) 383-7330, toll free, to be directly connected to your representative after entering your zip code.

Mark R. Baker
President & CEO, AOPA

*For more information on the Aircraft Owners and Pilots Association and the issues that affect your flying go to **www.aopa.org** today.

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ON THE COVER: A Piper Super Cub at a deer camp on the Engelbrecht farm, east of Alexandria, Minnesota. *Brad Thornberg Photo*

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The Future of State Aviation Trade Groups

by Dave Weiman

Midwest Flyer Magazine has been working with state aviation trade groups since the publication was founded in 1978, and has seen a gradual decline in participation among many member businesses beginning in the early 1990s.

Most of these organizations got started during World War II when general aviation flight schools were involved in training military pilots through the Civilian Pilot Training Program (CPTP), sponsored by the United States Government from 1938 - 1944. CPTP had the stated purpose of increasing the number of civilian pilots, with the underlying motive that they may be needed for military service should the U.S. enter the war.

Following the attack on Pearl Harbor when the U.S. first became involved in World War II, CPTP became the War Training Service (WTS) and, from 1942 to 1944, served primarily as the screening program for potential pilot candidates. Students would attend classes at colleges and universities, and flight training was provided by private flight schools. Then upon graduation, WTS students were required to enter the military.

Some 435,165 Americans, including men, women and minorities, learned to fly under CPTP, including such notables as combat pilot, test pilot, and astronaut, U.S. Senator John Glenn; Medal of Honor recipient and World War II ace, Maj. Richard Bong; triple ace, Col. Bud Anderson; B-24 Liberator pilot, U.S. Senator and 1972 Presidential candidate, George McGovern; Women Airforce Service Pilot (WASP), Dora Dougherty; and Tuskegee Airman, Maj. Robert W. Deiz. The CPTP achieved its primary mission, as told by Dominick Pisano in his book, *To Fill the Skies with Pilots*.

Many CPTP and WTS flight schools were full-service fixed base operations, which was a boom for general aviation. Then, immediately after the war, Cessna, Piper, Beechcraft and other companies were manufacturing aircraft in record numbers and this continued throughout the 1980s, and many fixed base operators became dealers, adding another source of revenue. General aviation was at an all-time high, and most state aviation trade groups got their start. Since then, the WTS program has been discontinued, local aircraft dealerships have been replaced by regional and national aircraft service and distribution centers, fuel sales and aircraft maintenance have reflected a decrease in flight hours, and

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ADVERTISING
PHONE: 608-772-1776
EMAIL:
info@midwestflyer.com

EDITORIAL
PHONE: 608-772-1776
EMAIL:
dave@midwestflyer.com

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many small town fixed base operators have either closed their doors or been consolidated by larger regional operators.

There was also a camaraderie among fixed base operators in the early years that does not exist as much today. Fellow operators would get together once or twice a year for lunch or dinner, to discuss common concerns and socialize. Vendors, such as insurance agencies, parts manufacturers and distributors, fuel distributors, and aircraft manufacturers add to the strength of state aviation organizations, and their support was – and still is – mutually beneficial.

Another reason state aviation trade groups organized was to make sure their members were getting a fair shake with local, state and federal government, and this remains a top priority among groups today. There is strength in numbers now, as there was 70 years ago.

Group health insurance was also a major benefit of membership, but the insurance industry has become so competitive, that most businesses today can get coverage for their employees on their own.

If state aviation trade organizations are to survive, it is our belief they need to focus on what they can do best, and recruit and retain members based on those objectives:

1) **Represent:** A state trade group's primary role should be to "represent" the industry before local, state and federal agencies. Annual aviation days at state capitols have become highly successful in recent years in making legislators aware of the issues facing general aviation. Likewise, some states now organize delegations involving state aviation organizations, including the trades, airport management, and business aviation, and meet annually with elected officials in Washington to rally support for general aviation.

2) **Promote, Recognize and Publicize:** Promote and recognize excellence among member businesses with an annual awards program, and promote and support the industry with a scholarship program, such as a flight training scholarship at a member flight school. Once award or scholarship recipients have been named, it is of crucial importance to publicize this in trade publications, local newspapers and on the Internet.

3) **Communicate and Educate:** Communication and education among member businesses with news and information, and with local, state and federal officials, is of vital importance.

Let's stop here before we get carried away and add more things than a state aviation trade group, made up of volunteers, can truly accomplish.

For instance, annual "conferences" have long been viewed as a necessity, but frankly, they take an enormous amount of time to produce, and are often made more difficult than they need to be with planning committee meetings involving a number of people, rather than allowing one person to plan and execute the event.

CONTINUED ON PAGE 62

Ask Pete!

by Pete Schoeninger

Pete Schoeninger

Q: You said an airplane can sometimes land with a little more crosswind on a grass runway than a paved runway. Why?

A: On grass runways, especially if wet, or if it has a bit of snow on it, you might slide just a little before a ground loop starts, unlike on pavement. Also, often grass runways are sometimes wider than paved runways, and in that case you can "cheat" a little and land a little more into the wind by going **slightly** diagonal.

Q: Last week I bought my friend's Cessna 310R. A week after buying it the starter on the left engine failed. I asked my friend for help in paying for the problem and he said "NO." Isn't he being a jerk? This issue could end a long-term friendship.

A: NO, your friend is not a jerk, not unless you have a written warranty from him, which would be very unlikely. That airplane is at least 35 years old, and maintenance is not always predictable. It's now your airplane, and your problem. Don't YOU be a jerk… Fix it, fly it, and enjoy a good airplane.

Q: Recently, you have discussed the "sister airplanes" to the Cessna 172 – the 172RG and Hawk XP, which were manufactured around 1980. Please comment on the Cessna 182RG, which like the others just mentioned, was only in production for a few years.

A: I thought the 182RG was one of Cessna's best. In addition to being fairly fast, it had a large useful load, and was a good short-field airplane. (I saw one – lightly loaded – go into a 1300 ft. strip with trees on each end, come to a stop, and from that point take off without turning around. Don't you try that, but it shows what the airplane can do when loaded very lightly.) From my experience, the 182RG operated more economically than the fixed gear version for two reasons: 1) On about the same fuel burn, it was about 10% faster, and 2) The engine was a detuned Lycoming 540, developing 235 hp at only 2400 RPMs, so they were never worked real hard and seemed to last much longer than the fixed gear versions with a different engine. But they were not perfect, every one that I flew was very loud, and the engine/prop combination used was not real smooth.

Piper Cub N98137 was bought new and owned by Spring City Flying Services, Inc. of Waukesha, Wisconsin. As a young line boy, aviation advice columnist Pete Schoeninger washed and flew this aircraft from 1958-60 before Spring City sold it in about 1960. The aircraft had several owners since then, including Bob Jenkins of Canton, Georgia, who has owned the aircraft for the past 30 years. Schoeninger managed to locate Jenkins a couple of years ago at a fly-in in Brodhead, Wisconsin, and renewed his acquaintance with the Cub. Now, Jenkins' dog, a three-year-old long hair Dachshund named "Chester," thinks it is his airplane.

Q: I heard you say a pilot should be capable of instrument flight when going over water under some VFR conditions. Why?

A: Under an overcast sky, out of sight of land, especially with some haze, there will be times when you cannot define the horizon, so you have to be able to fly by reference to instruments. The same situation exists if you are flying at night over water out of sight of land when there is 100% cloud cover obscuring stars and the moon. It really is like flying in a black hole. Flying at night in remote regions of the country, where there are few if any lights on the ground, can also create a black hole effect.

Q: You said you ferried a few Lake Amphibians from the factory in Maine to the delivery center in Houston, but you did not have a seaplane rating. Wasn't that illegal?

A: You can fly an amphibian with a land-only pilot certificate, but you cannot legally land or take off on water without a seaplane pilot certificate (unless it is frozen!)

Q: What is a "locking" tailwheel and why are they sometimes used?

A: Tailwheels that can be locked

straight (not common on light planes) are particularly useful when taxiing in a strong crosswind or in a heavy larger tailwheel airplane to keep going straight on takeoff or landing. You align yourself with the taxiway or runway you want, then "lock" the tailwheel in place. You can turn the rudder, but the tailwheel will not turn. One other use, in a Cessna 185 you need a lot of right rudder to stay straight during the initial takeoff run, and a lockable tailwheel was an option offered on those airplanes to help keep you straight. They are common on heavy tailwheel airplanes like Twin Beechs, B-17s, DC-3s, and some others.

Q: I am about to buy a 1979 Cessna 172, but a little concerned that my trips to my relatives in another state will stretch the range (40 gallons) a little. Ideas?

A: Stop! Don't ever stretch your range. Believe me, someday you will thank the Lord, and me (in that order) that you had extra gas onboard. Examples of problems include arriving at your destination just as the airport closes due to bad weather or a gear up landing by the guy ahead of you. Besides planning an enroute fuel stop, and limiting yourself to 40 gallons, find a 172 of similar year with 50 gallons of fuel capacity, which was installed as an option. Or, consider Piper's Warrior, a good competitor to the 172 of the same year, and carries 48 gallons with similar overall specs as the 172. And don't forget my favorite economical cruiser, the 172RG which carries 60 gallons (but with reduced cabin load.) All of them can be had for roughly the same price of $35 - $60K, depending on condition, engine and airframe times, and installed equipment.

Q: Who have you found to be the best and worst candidates to learn to fly?

A: I think the best student pilots are the ones who are paying all or at least part of the cost of lessons. You can tell by the third or fourth lesson if the student shows up prepared, on time, and healthy, they should do okay. By far the worst are spouses or children of a pilot who is paying the tab, and the spouse or kid really has little interest in learning to fly. In my experience, usually those folks give up after a few hours.

EDITOR'S NOTE: Contact Pete Schoeninger at pete.harriet@gmail.com with your questions for this column or for consultation on aviation business and airport matters. Pete has four decades of experience as a line technician, airplane salesman (300 aircraft sold thus far), appraiser, snow removal supervisor, airport manager, and as the manager/co-owner of a fixed base operation.

DISCLAIMER: The information contained in this column is the expressed opinion of the author only, and readers are advised to seek the advice of others, and refer to the Federal Aviation Regulations, Aeronautical Information Manual, Pilot's Operating Handbook for the airplane(s) they fly and other instructional materials before attempting any procedures discussed herein. ❑

Whose Letter of Authorization Is It Anyway?

by Greg Reigel
Attorney-At-Law


Greg Reigel

A scenario I see more regularly than I would like involves an aircraft management company that manages a turbojet aircraft and provides pilot services to multiple users of the aircraft. Since the managed aircraft is capable of flight up to and beyond flight level 41,000 feet, the aircraft needs FAA approval to operate in the Reduced Vertical Separation Minimum ("RVSM") flight levels from 29,000 to 41,000 feet. For reasons that are not always clear to me, the management company applies for and obtains an RVSM letter of authorization ("LOA") in its own name for the aircraft, but then operates the aircraft on behalf of the operators. And, unfortunately, by doing so it has exposed not only itself, but also the operators to the wrath of the FAA for violations of the regulations.

In order to understand why this is the case, we need to first look at why an LOA, or its counterpart letter of deviation authority ("LODA"), is necessary. LOAs and LODAs are issued to Part 91 operators to provide authority to operate in a particular manner. An LOA authorizes an operator to engage in a particular activity, such as operation in RVSM airspace (although the need to have an RVSM LOA is subject to a notice of proposed rulemaking that may eliminate the requirement in lieu of having certain required ADS-B Out equipment).

A LODA permits an operator to deviate from a regulatory requirement with which the operator would otherwise be required to comply, such as permitting an instructor to operate an experimental aircraft for hire for the purposes of type-specific training. LOAs/LODAs are generally only applicable to Part 91 operators. (Operators under Parts 121, 133, 135, etc. receive similar authority in the form of operations specifications or waivers.)

LOAs and LODAs are "voluntary" and are issued by the FAA based on certain specific situations. That is, an operator doesn't have to request an LOA or LODA unless the operator wants to do something that requires FAA authorization. In the RVSM context, if a Part 91 aircraft operator wants to operate in RVSM airspace, the operator will need to obtain the necessary LOA. But the aircraft operator is also free to avoid operating in RVSM airspace, in which case the operator would not need an RVSM LOA.

A Part 91 operator is the party who has "operational control" of the aircraft for a particular flight. What does that mean? Well, 14 C.F.R. 1.1 states "[o]perational control, with respect to a flight, means the exercise of authority over initiating, conducting or terminating a flight." Thus, the FAA takes the position that the true operator of the aircraft is the party who has operational control for a particular flight.

Why does operational control matter when we are talking about LOAs and LODAs? Because LOAs/LODAs must be issued to the "operator" of the aircraft, i.e., the party that exercises operational control during the flight. And the party with operational control may not necessarily be the owner or manager of the aircraft.

For example, when we are looking at operation in RVSM airspace, 14 C.F.R. §§ 91.180 and 91.706 state in part:

" . . . no person may operate a civil aircraft (of U.S. registry) in airspace designated as Reduced Vertical Separation Minimum (RVSM) airspace unless:

(1) The operator and the operator's aircraft comply with the requirements of appendix G of [Part 91]; and

(2) The operator is authorized by the Administrator to conduct such operations."

Thus, identifying the party who is the operator of the aircraft is critical because that dictates who must have the authorization.

So, who should apply for and be issued an LOA/LODA? Registered owners who are conducting personal or business flights under Part 91 for their non-air-transportation use; and parties assuming operational control under "dry" lease or use agreements, such as Part 91 and Part 135 operator lessees conducting operations under Part 91. Keep in mind that if multiple parties are operating the aircraft, multiple LOAs/LODAs may be required!

Who should not apply for or be issued an LOA/LODA? "Flight Department Companies" (e.g., holding companies/single purpose entities); Owner Trustees (e.g. where a trust is the registered owner of the aircraft, but the aircraft is operated by the party holding the beneficial interest in the trust); and Part 91 aircraft management companies that simply assist aircraft owners and Part 91 operators with their ownership and/or operation of the aircraft.

What can you as an operator do to make sure you have the necessary authority you may need or want from the FAA? First, do your research! Make sure you understand both your and the FAA's obligations in the LOA/LODA process. Next, when you are applying for an LOA/LODA, ensure that your application is as complete and correct as possible. (Remember, garbage in = garbage out). If necessary, ask for a meeting with FAA personnel to submit an application in person. And finally, follow-up with the FAA on a regular basis to confirm the status of your application and whether the FAA has questions or needs additional information to process the application.

EDITOR'S NOTE: Greg Reigel is an attorney with Shackelford, Melton, McKinley & Norton, LLP, and represents clients throughout the country in aviation and business law matters. For assistance, call 214-780-1482, email greigel@shackelfordlaw.net, or Twitter @ReigelLaw. ❑

The Procedure Turn... When & How? Circle-To-Land Approaches... Safe or Unsafe?

by Michael J. "Mick" Kaufman


Michael Kaufman

"*The procedure turn"* is a topic I have written about in the past, but due to some recent changes in approach procedures, it is a topic worth revisiting at this time. Another topic worth revisiting due to the high number of accidents that have occurred executing these maneuvers are *"circle-to-land approaches"* (FIG 1).

The Procedure Turn… When & How?

The procedure turn is referenced in Federal Aviation Regulation (FAR) 91.175 and in Aeronautical Information Manual (AIM) Chapter 5-4-9 for those readers who would like additional information on the topic. Procedure turns are often confusing to pilots, so I am

National Transportation Safety Board
Aviation Accident Final Report

Location:	EAGLE RIVER, WI	**Accident Number:**	CHI96FA067
Date & Time:	12/30/1995, 1443 CST	**Registration:**	N991PC
Aircraft:	CESSNA 560	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	2 Fatal
Flight Conducted Under:	Part 91: General Aviation - Business		

Analysis

The airplane was circling to land on runway 22 after executing a VOR/DME approach. The airplane impacted the ground approximately one quarter mile northeast of the runway 22 threshold. The wreckage path covered a distance of approximately 350 feet. Control continuity was established. Airframe, engine and navaid examination revealed no abnormalities. The left wing and horizontal stabilizer leading edges had approximately one-eighth inch of rime ice adhering to their leading edges. Two witnesses reported seeing the airplane rolling from the left to the right. The Eagle River AWOS was not available on a VHF radio frequency, due to radio frequency congestion at the O'Hare International Airport, Chicago, Illinois.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the failure of the pilot to maintain airspeed while executing the circling approach. Factors were the descent below minimum descent altitude, the fog, the low ceiling and the icing conditions.

FIG 1

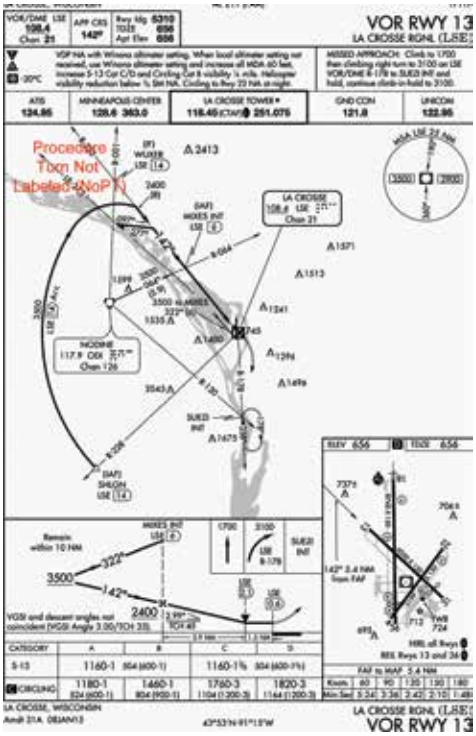

FIG 2

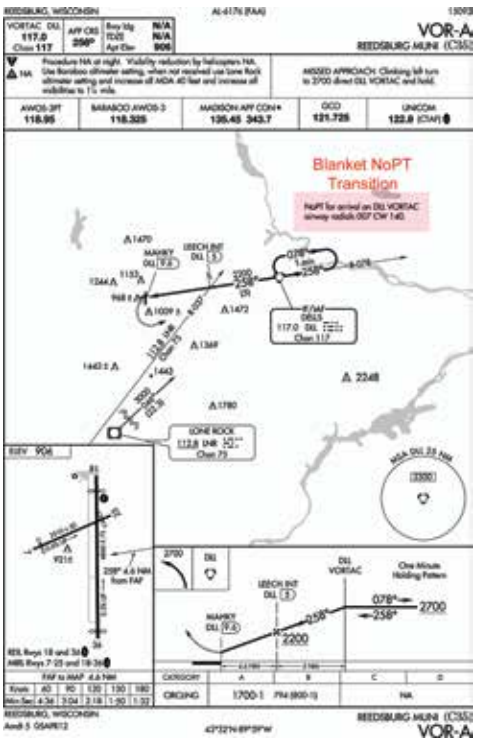

FIG 2b

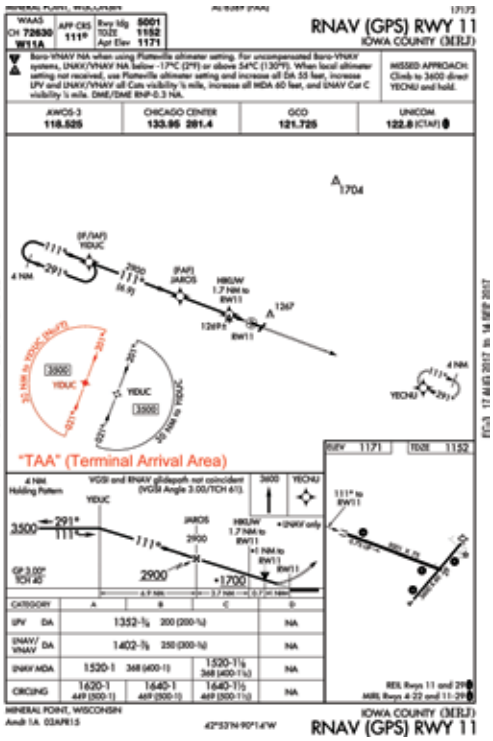

FIG 2c-1

hoping this article will provide clarification.

In flight training, I find that most pilots can fly the approach either with the autopilot or by hand flying, although I continue to find that the latter method seems to have become a weaker skill. So, how do we transition from the en-route phase of flight to the approach, and is a procedure turn (course reversal) necessary? If I were to generalize getting established on an approach from the en-route segment of flight, I would say to fly directly to the Initial Approach Fix (IAF) and begin the approach, but there are so many caveats that need to be addressed, which we will look at and discuss in detail with examples. First, I will list the following conditions, then discuss them as conditions eliminating a procedure turn in more detail:

1. When receiving radar vectors to the final approach course.
2. When the symbol "No PT" is depicted on the initial approach segment being used.
3. When conducting a timed approach from a holding fix.
4. When cleared for a straight in approach by Air Traffic Control.
5. When a holding pattern procedure turn is shown and none of the above applies.
6. When a teardrop procedure turn is shown (Procedural Track).
7. There is no procedure turn shown on the chart.

When covering each of the above items in greater detail, it is important for the pilot to understand number "1." When getting radar vectors for an approach, a course reversal should never be done. If the pilot is in doubt, he needs to ask the controller. The controller's handbook (when followed) states that whenever a controller gives radar vectors, it should be specified with the reason for the vector when giving the first vector to the pilot. For example: *"Cessna N22HB, turn right heading 270, vectors for traffic,"* or *"Piper N6346R, turn left heading 210, vectors for the descent."* It may be confusing to know that in either of the above cases, the procedure turn is not eliminated, as neither one of these vectors were for the approach, which should be clearly specified by the controller. If you as the pilot are unsure, ask the controller.

Item 2 of the list requires a lot of explanation and examples. The first

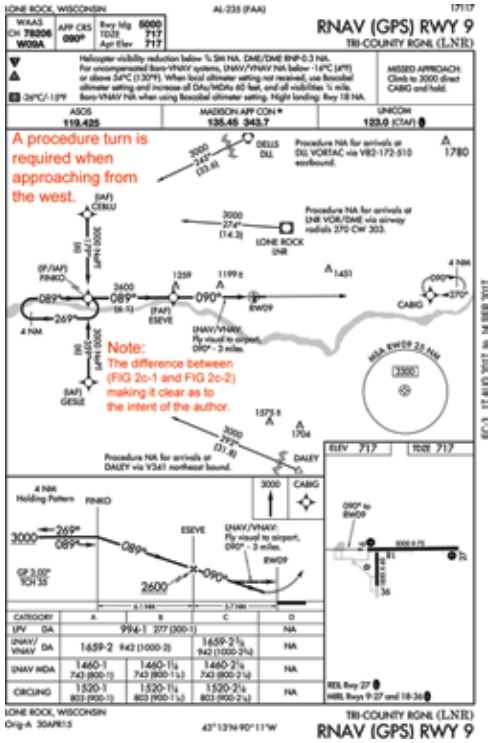

FIG 2c-2

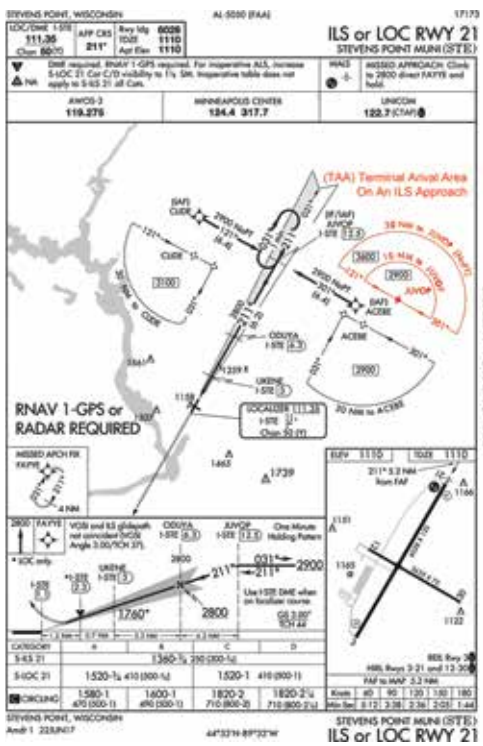

FIG 2d

example is when flying a DME arc, which I used to explain as a separate item, but have chosen to include it in the "No PT" section. The standard procedure when an arc is assigned or requested by the pilot is to join the arc at the IAF, which is on the far end of the arc. This has been a controversial topic for years among pilots and instructors, so I will give you my opinion on this item. In some cases, flying to the IAF then flying the complete arc would cause the pilot to add several minutes to the approach, where joining the arc mid point would shorten the approach. To make this legal in my opinion, you should ask the controller for a vector or heading to join the arc, eliminating any question. In some cases, the controller will assign this in your approach clearance. Example: "Piper 78459,

FIG 3

FIG 6

fly heading 210 to join the 10 DME arc, report established on the arc." It should be pointed out that when flying an arc, a procedure turn should never be done even if the arc is not labeled "No PT." It is rare to find one that is not labeled "No PT," but I found one in (FIG 2). Another example is a "No PT Transition" where a pilot flying from a fix to the IAF along a published course with an altitude specified and is labeled "No PT." It is important to note that the pilot is required to maintain the last assigned altitude while flying this transition unless *"cleared for the approach"* by ATC. Sometimes, there is a notation on the approach chart specifying that pilots arriving from a specific direction are not required to do a procedure turn course reversal (FIG 2b); I refer to this as a "blanket transition."

When GPS approaches came into existence, a new definition became part of the pilot vocabulary, which is the "TAA" (Terminal Arrival Area). This brought another method of eliminating the procedure turn as some of these segments were labeled with the "No PT" (FIG 2c-1) showing a situation similar to the "blanket transition described and shown above. I remember from a previous article I had written in *Midwest Flyer Magazine,* where I displayed and referenced (FIG 2c-2) stating that a procedure turn was required when approaching from the west and using "FINKO" as the IAF on this approach. I received some contrary feedback from our readers. Note the difference between FIG 2c-1 and FIG 2c-2, making it clear as to the intent of the terpsters writing the approach. In looking at a recent approach change (FIG 2d), I was surprised to see a TAA depicted on a non-GPS approach, which is the first one I recall seeing. I believe this rewrite of the approach is due to the future shut down of the Stevens Point (STE) VOR.

Item 3 deals with being cleared for a timed approach from a hold. It has been many years since I have had a timed approach from a holding fix, and many of you may have never heard of it. This is where ATC would build a stack above a fix and aircraft were holding at different altitudes and given an EFC (Expect Further Clearance) time to leave the hold. As aircraft at the bottom of the stack would leave the hold and proceed inbound on the approach, the next airplane would drop down and adjust its holding pattern to arrive over the fix to begin the approach as close as possible to the EFC time.

Number 4 is an easy one similar to number 1, where ATC clears you for the straight-in approach. There is one small error that a pilot could make, and that is the difference between a straight-in approach and a straight-in landing. The confusion is that a straight-in approach means no procedure turn, and a straight-in landing means you do not circle for a different runway.

Number 5 addresses the holding pattern style of a procedure turn, which should be flown as drawn on the chart. It has always been confusing to pilots as what to do as to the entry, and how many times does one go around the "race-track" pattern to satisfy the intent of the terpster. Entries should be the same as if this were a standard hold as part of the missed approach or assigned by ATC. The difference between the missed approach hold and the procedure turn version is how it is drawn on the chart (FIG 3 Red or Green). The procedure turn version is always drawn with a heavy solid line (Green), and the missed approach version is a broken line (Red). If both are co-located, it is depicted as a solid line, meaning the procedure turn and missed approach are at the

same fix. When entering as a procedure turn, the pilot should use the same techniques (parallel, teardrop, or direct) as if it were a missed approach hold. The next and confusing part is how many turns around the hold should the pilot do before proceeding in on the approach once cleared by ATC. The secret is not to count the turns, but rather count the times you cross the holding fix and that number should be two regardless of the entry.

Should ATC assign a hold at the fix due to traffic, we have a different situation. To better explain what is to be done in this situation (FIG 3), try to follow this statement: *"When holding at the FAF or IF that is aligned with the final approach course, though shall not do a procedure turn when cleared for the approach."*

In following this diagram (FIG 3) on the approach, should you be holding as depicted, you would not do the procedural turn. The important criteria is that the holding pattern is aligned with the inbound approach course. Should the hold not be aligned with the inbound course, we would still need to do a procedural turn. In theory if we look at the approach chart, we see that both the LNR and DLL VORs are labeled IAF, and there is an IF (intermediate fix) at the slice intersection. If I were coming from the DLL VOR, there is a "No PT," showing that if I were flying from that direction, I would not do a procedure turn. If I was proceeding along the route between DLL and Slice and ATC gave us the following clearance: *"Bonanza 25DM, you are cleared to the Slice intersection to hold northwest on the 022-degree radial of the LNR VOR. Expect further clearance at 22:15 Z."* I have drawn (Non-Published Hold) the holding pattern on (FIG 3 in green) to show what it would look like. When the approach clearance is given by ATC, you can see that Slice is an IF, and the course is aligned, so you would proceed inbound with no procedure turn when an approach clearance is received.

Number 6 may be the standard of course reversals. Many flight schools and instructors have different methods of making the standard procedure turn, and the FAA leaves the method selected to the pilot with one exception – the side of the course that is protected for the maneuver. We see the barb on the end of the maneuver and it is standard to turn opposite the barb, but regulations do not specify that. On the Garmin GPS boxes on the map page, a dashed magenta arc appears that shows the limitations of the airspace protected for the approach. Once your GPS has determined that you are inbound, this arc disappears. Should you look at an approach chart, you will see a notation "remain within 10 miles," and there is a reference as to what that point is and the mileage is shown. Should the occasion happen that turning opposite

the barb will put you outside the protected airspace, it is acceptable to turn in the direction of the barb. Should a procedural track (FIG 6) be shown on the approach chart, it must be flown as depicted if the pilot should choose this option for a course reversal.

Number 7 on our list applies to large airports, usually Class B airspace, where there is no procedure turn or course reversal shown on the chart. In this case, radar is always required and aircraft are always vectored for the approach.

So, the next time you are making an approach, think about what is required by procedure, and if there is a question, ask ATC; it will make the airspace system safer knowing that pilots and controllers are on the same page.

Circle-To-Land Approaches…
Safe or Unsafe?

When I started my campaign against circle-to-land approaches, there was an accident I remembered distinctly, but it required some research to find it, which I finally did. It happened at one of the airports, which I fly out of on a regular basis, Eagle River, Wisconsin (KEGV) (FIG 1). As part of an instrument proficiency check that I give as an instructor, I require the pilot to exercise a circling approach by FARs. This is a useless maneuver unless it is done in instrument metrological conditions (IMC), and if it is, I consider it too dangerous to practice. Given the fact that the recent circling accident I referenced in the previous issue of *Midwest Flyer Magazine,* and the one referenced in (FIG 1), were both flown with professional two-pilot crews, it is no wonder the airlines either prohibit or severely restrict pilots from doing them in their flight manuals. I can understand a decade ago, pre-GPS days, where the wind did not always align with the runway served by a precision approach, and a downwind landing was not an option. Today, we have an approach to almost every usable runway. It may require a pilot to fly an extra 10 minutes to get established on the preferred approach, but it is worth it safety wise.

Happy Landings!!!!

EDITOR'S NOTE: Michael J. "Mick" Kaufman is a Certified Instrument Flight Instructor (CFII) and the program manager of flight operations with the "Bonanza/Baron Pilot Training" organization. Kaufman conducts pilot clinics and specialized instruction throughout the U.S. in a variety of aircraft, which are equipped with a variety of avionics, although he is based in Lone Rock (KLNR) and Eagle River (KEGV), Wisconsin. Kaufman was named "FAA's Safety Team Representative of the Year" for Wisconsin in 2008. Email questions to captmick@me.com or call 817-988-0174.

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Scholarships

Michigan, Tennessee, Ohio, Missouri & Wisconsin Students Among AOPA Flight Training Scholarship Recipients

FREDERICK, MD – The Aircraft Owners and Pilots Association (AOPA) has announced the names of the 23 students who earned scholarships through the 2017 AOPA "You Can Fly High School Flight Training Scholarship Program." The $115,000 scholarship program, which is made possible by donations to the AOPA Foundation, is part of the AOPA High School Aviation Initiative that works to create and support high school aviation science, technology, engineering, and math (STEM) programs, and helps to further career opportunities for the next generation of aviation and aerospace professionals. Among those students receiving scholarships are Sinan Abdulhak and Luke Harry of Michigan; Vernecelyn Allen and William Boles of Tennessee; Emily Parrish of Ohio; Shelby Schulz of Missouri; and John Sitter of Wisconsin. ❑

Technical Advances Enriched By Manufacturer Representatives At AirVenture 2017

by Harold Green


Harold Green

Attending EAA AirVenture Oshkosh and its predecessor, the EAA Fly-In Convention, since about 1960, I have watched it move from Rockford to Oshkosh and grow to a level that would have seemed impossible a few years ago. I admire the workmanship and skill that go into many of the experimental and restored aircraft; it is beyond belief. The EAA members who build, restore and create aircraft are to be envied.

My focus at AirVenture this year, July 24-30, was on the "technical advances" offered to general aviation, and 2017 turned out to be a wellspring of information.

First, there did not appear to be any dramatic new technology, but there also wasn't time for a thorough comparative investigation into any specific products.

I am especially wary of companies that attempt to dazzle with new, technical-whiz-bang products, which will probably be long gone before next year rolls around. However, manufacturers presented a degree of technical and business maturity that I did not see or recognized in prior years, and I want to thank them for that. In the past, questions about service and support were often met with a brush-off from some companies as though that was not important. But this year, most vendors (i.e. avionics), were quick to discuss the philosophy and extent of their service networks, and were sincere in asking where I got my aircraft serviced. This indicates to me that manufacturers are finally recognizing the importance of having their equipment installed and maintained by reputable shops.

It should be noted that there are still a lot of radios built in the 1970s flying around and working well. Support for these units exist to the extent parts are available, and technicians capable of repairing them.

Modern equipment use more custom designed parts to reduce weight, increase capability and reduce cost. My hope is that new products will achieve long-term support as well, but perhaps in a different form than in the past.

The new products, while not revolutionary, were impressive. We all expect the big guys to have many new

products to show and they did. These products represented evolutionary, rather than revolutionary advancements, which to me means that manufacturers are maturing.

There was some very impressive second and third generation products on display. Further, representatives were prepared and eager to show necessary, but not so sexy things, like the micromechanical gyros and pressure sensors that are required for the equipment to function. Some of the equipment was a replacement for the six-pack, which saves panel space, increases reliability and reduces in weight. Most were well done and should improve pilot awareness and decrease maintenance frequency and costs. Human factors have improved because of increased attention to ergonomics. All representatives were also sensitive to safety/reliability issues. In summary, in my opinion, this was frankly the best year yet for new products for experimental and legacy aircraft, as most new aircraft come with technically advanced equipment anyway. There were self-contained electronic units, both primary and backup, even including backup batteries, providing attitude, altitude, airspeed, and heading for under $10,000, which would allow vacuum pumps to be eliminated in single-engine aircraft along with all those electromechanical gyros. Over a few years, the cost of the equipment will be more than recovered through decreased maintenance and replacement costs. In speaking with the owner of the avionics shop I have dealt with for years following AirVenture, my impressions of the show were reinforced.

Moving on, the Proficient Pilot Center (PPC) at AirVenture was very active this year. For those not aware of PPC, it is an activity sponsored by EAA, the Society of Aviation Flight Educators (SAFE), and the National Association of Flight Instructors (NAFI), with support from Redbird. Fourteen (14) Redbird flight simulators – seven six-pack equipped and seven G1000 equipped, plus a crosswind trainer – were available at no cost on a first-come, first-serve basis. People could sign up with a volunteer instructor and a flight simulator.

The volunteers from NAFI and SAFE developed a series of flight scenarios – seven VFR and seven IFR. There were 2,731 scenarios "flown" during the week. The Redbird visuals were excellent and provided realism, particularly in low IFR approaches. There was also a crosswind trainer available. Additional volunteers served as air traffic controllers providing radio communications to add to the realism. Other volunteers served as coordinators, signing up students for time slots and directing them to available instructors.

Each student could state what their interest was, and use the scenario most appropriate. All told, this was a particularly valuable effort on the part of those involved.

From the standpoint of an instructor, some interesting facts emerged. Of particular interest to me was the fact that many pilots, when confronted with a descent path resulting in a potential touchdown short of the desired touchdown point, tended to raise the nose, rather than add power, regardless of the airspeed. As a result, several people crashed the Skyhawk short of the runway. I've been complaining about the lack of attention to the pitch/power relationship in our training for some time. This just tended to reinforce that opinion.

Another scenario was to land on an "aircraft carrier." I witnessed one student who did so successfully. Others, did not. Another young man said he was just learning and had about 11 hours of instruction.

The student was set up to land at Oshkosh in severe clear. He held altitude reasonably well on downwind, and when turning base, seemed to have a little difficulty with the throttle. He tended to react late when advised to change power. In fact, his actions with the throttle were somewhat puzzling to me, but I attributed it to a strange situation for the student. He didn't respond as I expected to my advice to add power and eventually crashed short of the runway due to lack of power. As our crumpled red/white Skyhawk burned merrily about 20 yards short of the runway, the student turned to me and said contritely: *"I guess I should have told you that all my time has been in sailplanes."* Lesson learned by both student and instructor. After that, I questioned students more closely regarding their flying background.

In summary, this year's AirVenture appeared to be very advantageous to attendees and more fun than ever, but a lot depends on one's attitude. If you go with a positive attitude, you will leave fulfilled.

If you have never attended EAA AirVenture Oshkosh, you should seriously think about doing so next year. I have found that even people who aren't directly involved in aviation also find the event a great adventure. After all, with more than 10,000 airplanes, 600,000 people, daily airshows, both modern and vintage aircraft on display, and talking to and learning from the experts and icons in aviation, what better place is there to be than at Oshkosh in the summertime?

EDITOR'S NOTE: Harold Green is an Instrument and Multi-Engine Flight Instructor (CFII, MEII) at Morey Airplane Company in Middleton, Wisconsin (C29). A flight instructor since 1976, Green was named "Flight Instructor of the Year" by the Federal Aviation Administration in 2011, and is a recipient of the "Wright Brothers Master Pilot Award." Questions, comments and suggestions for future topics are welcomed via email at harlgren@aol.com, or by telephone at 608-836-1711 (www.MoreyAirport.com).

Flying and Chewing Gum

by Mark Baker
AOPA President & CEO


Mark Baker

As I begin my fifth year of leading AOPA–and only the fifth person to do so in 78 years–I continue to be amazed at the breadth of work the organization undertakes on behalf of members and pilots everywhere. From every level of government and through every conceivable media channel, your staff works daily to improve the general aviation experience. The real DNA of this organization is advocacy work. And we have three big challenges facing us: the so-called privatization of air traffic control, fighting egregious prices and fees at certain FBOs, and implementing BasicMed. All three play a crucial role in the success of general aviation and protecting our freedom to fly.

AOPA efforts to fight ATC privatization have been in full throttle for months, with no sign of slowing down. Our government affairs experts in Washington are leading the charge while working alongside industry leaders and lawmakers on Capitol Hill. The airlines will continue pushing for privatization until we have a long-term solution for FAA funding, and that's why we urge you to keep reaching out to your Congressional representatives and remind them to vote **NO** on privatization!

We cannot risk handing over our skies to the airlines and we encourage you to join AOPA in the fight to protect GA. Please visit **aopa.org/takeaction** to reach your local representatives directly.

While the privatization debate in D.C. rages on, we're also focused on battling egregious pricing at certain FBOs across the country and ensuring the successful implementation of BasicMed.

The continued consolidation in the FBO industry has created serious concerns from leaders across GA. This year, AOPA has collected hundreds of complaints from members regarding egregious FBO fees and pricing. Unreasonable practices and cost-prohibitive airport access can severely affect all aspects of general aviation and the surrounding economy. Unlike gas stations along a highway, just going somewhere else is not always a practical option in general aviation. While reaching

out to community leaders, airport boards, and supervisors, we have been pleasantly surprised by overwhelmingly positive feedback and the desire to work together to protect GA.

Many communities have asked for help and some, have already taken steps to stand up for general aviation.

The overall theme in working with airport boards and community leaders has been reasonableness, transparency, and competition. Through collaboration, AOPA believes the contentious climate at many other locations can also be improved. For updates on AOPA's egregious FBO pricing work, or to submit a report, visit **aopa.org/FBOpricing**.

Lastly, I know that many of you are aware of and already flying under BasicMed. We've seen great success so far with more than 15,000 pilots (and counting) now eligible to fly under the new rules that provide an alternative to third class medical certification. The Bahamas Civil Aviation Authority has also announced that pilots can now fly to the Bahamas under BasicMed, and as of August 11, the Civil Air Patrol has also begun allowing BasicMed. If you're still interested in more information on BasicMed, you can visit our Fit to Fly resources at **aopa.org/fittofly**.

Looking forward to what the next five years bring. ❑

AOPA President Returns To Home Field, Now New & Improved!

FOREST LAKE, MINN. – Forest Lake, Minnesota held an open house and fly-in August 20, 2017, at its new and improved Daniel A. DePonti Municipal Airport (25D). Among the pilots and special guests was AOPA President Mark Baker, who flew to the event, all the way from Anoka County-Blaine Airport in Blaine, Minn., 11 nm away, in his 1953 Piper PA-18 Super Cub on amphibious floats.

The Forest Lake airport was established in 1941 and was grass until 2016, when it was paved. The runway is now 2,700 feet long, and there is a taxiway.

As he climbed out of his airplane, Baker said, *"It's like coming home."* That's because Baker, a native of White Bear Lake, Minn., has a 40-year history of flying into the airport and a unique story of how he bought his Super Cub in Forest Lake.

In an article posted online at the AOPA website, Baker recalled what was a life-changing experience for him when he flew N1352C for the first time, shortly after the ice melted from Forest Lake:

"I first met Five-Two-Charlie in the early 1990s. A friend of my dad's had been taking care of a lake house with a hangar and an old plane. Neither my dad nor his pal knew what type of airplane it was, but they wondered if I'd like to take a look. And when we opened the hangar door, I wasn't sure either. The airplane was covered in plastic and parts of it were painted blaze orange. Then I saw the logbooks, neatly set out on the workbench. It was a 1953 Super Cub with 309 hours total time. Last flown in the 1970s, the airplane was a time capsule just waiting to be cracked open. It was sitting on straight floats, but there were skis and wheels in the hangar as well. The fabric had been replaced in the 1960s. There was no radio and no transponder, but the original Lycoming O-290-D2 engine had been carefully pickled. And I knew I had to have it!"

The owner bought the plane new in 1953 for $6,600, including the floats and skis. He was a tough negotiator then and a tough negotiator now, said Baker, but the two aviators worked out a fair deal to both.

The following spring, Baker hired two mechanics to get the airplane in flying condition. Trees had grown in front of the hangar, adding to the challenge, and they had to wait for the ice to melt on the lake. Not only wasn't the plane ready, but neither was Baker, who needed to get his seaplane rating.

Mark Baker *(center)* with his 1953 Piper PA-18 Super Cub (N1352C) at The Daniel A. DePonti Municipal Airport in Forest Lake, Minnesota, with local airport representatives. *(L/R)* Pilots, John Burgess and Mark Lynch; and Forest Lake Airport Commission members Rick Ashbach, Tim Dalbec and John Schmidt.

Not to worry! Baker met Bruce Hanson of Surfside Seaplane Base in Lino Lakes, Minnesota, who hooked him up with Brian Schanche of Adventure Seaplanes – a training and seaplane rental operation with locations in Minnesota and Florida. When Baker met Schanche, he asked him how long he had been a flight instructor, and when Schanche said, *"about two days and you're my first student,"* that was good enough for Baker and he signed up. Since then, Adventure Seaplanes has become one of the largest and most respected seaplane flight schools in the country, and Baker has gone on to own and fly a number of seaplanes, including a Beech 18.

"Our first flight in Five-Two-Charlie was a flight that changed my life," said Baker. *"I had loved the airplane at first sight, but once we lifted off, I knew this was flying as it was meant to be."*

After accumulating hundreds of hours in the airplane, Baker replaced the original 135 hp engine with a 160 hp engine, and bought new Wipline 2100 amphibious floats. Baker has flown the plane to Baja, Hudson Bay, New York, Key West, and the Idaho backcountry.

EDITOR'S NOTE: Special thanks to Barb Pribyl of The Daniel A. DePonti Municipal Airport in Forest Lake, Minn., Mark Baker, and the Aircraft Owners & Pilots Association for providing the information for this article. ❑

Covering The Great Lakes Region For You!

by Kyle Lewis
Manager, Great Lakes Region
Aircraft Owners & Pilots Association


Kyle Lewis

Summertime is usually filled with aviation activities, but all are overshadowed by EAA AirVenture Oshkosh in Oshkosh, Wisconsin, held July 24-30. I was fortunate to fly to Oshkosh with co-workers Les Smith (You Can Fly Program) and Joe Kildea (Communications). Les and Joe were planning to depart Frederick, Maryland in AOPA's Cessna 182 workhorse, and stop in Jackson, Ohio to pick me up. Of course, on the day of departure, weather happened! A slow moving low pressure system brought rain and wind from western Ohio, and the James A. Rhodes Airport (I43) where I'm based, was weathered in. So, I drove to Parkersburg, West Virginia (PKB) and met up with the guys, and we took off from there.

Our flight proved uneventful. We flew the lakeshore VFR corridor around Chicago using flight following with Chicago Approach. Chicago Approach handed us off to Kenosha tower (KENW) in Wisconsin, where we stayed the night due to weather further north.


Flying the VFR corridor around Chicago.

The overnight in Kenosha proved beneficial. We spent some time the next morning with fellow aviators who fly motor gliders out of Detroit City Airport (KDET), who were on their own Oshkosh adventure. I had some insightful conversations with them on their opinions on the Detroit airport, and FBOs they visited across the region.

Around noon, the ceilings had improved enough for VFR and it was wheels up again heading for Juneau, Wis., where we met up with the "C2O" (Cessnas to OSH) mass arrival group. As luck would have it, we were 35 minutes late for the safety briefing, so we were unable to join them, as were others who were delayed by the weather. Although we were disappointed, we understood and applauded the organizers for running a tight ship.

With clear skies ahead, we made course for the "FISK" arrival into Oshkosh. If you have never flown into KOSH, this is basically an invasion plan. Traffic coming from the south flies to a town called Ripon, then follows railroad tracks to another small town called Fisk. All the while, maintaining 90 knots and 1800 feet MSL. Of course, we weren't the only ones flying in, so it was all eyes looking out for traffic. At Fisk, controllers on the ground gave runway assignments splitting the line of traffic into two groups. We were able to touch down on the green dot on Runway 27 at Wittman Regional Airport.

This was my first year working for AOPA at AirVenture, and a rewarding one, meeting and assisting members and non-members on a wide range of issues in the AOPA Pavilion. While at Oshkosh, the number of BasicMed completion certificates passed 15,000, which is a strong number for only 100 days into the program.

At Oshkosh, members were able to file complaints with AOPA against fixed base operators for egregious pricing and fees, now totaling over 600 nationwide.

At the forefront was "ATC Privatization." Opposing ATC Privatization has been a battle for some time, but recently, there has been a very organized effort by U.S. Representative Bill Shuster of Pennsylvania for privatization. The White House is also behind this, albeit on very erroneous and misguided information. This is not privatization as we usually know it. This is giving the airlines and large commercial operators a monopoly in controlling the skies. Here are some quick bullet points on what privatization of the air traffic control system will mean to general aviation and taxpayers:

- Would cost tens of billions of dollars to implement.
- Would hurt general aviation airports in rural America.
- Would create a "too-big-to-fail" monopoly that would require taxpayer bailouts.

Watching the airshow at EAA AirVenture Oshkosh from the AOPA Pavilion.

- Would not be effective in decreasing airline delays. Eighty percent (80%) are caused by airline scheduling and weather.
- Would be giving away a national asset that our tax dollars have already paid for.

AOPA likes the term "modernize," and we want the funding stream for FAA/ATC stronger so delays in implementing new technologies like NextGen can happen quicker and more efficient. The government does a good job with ATC as our current system is the most complex and safest in the world. I hope that by the time this is in print, GA will have won this battle. If, however, the issue is still on the table, please contact your representatives and urge them to oppose "ATC Privatization." Over 4,000 attendees signed our petition at the AOPA Pavilion during AirVenture.

On Tuesday evening during AirVenture, our Airport Support Network (ASN) volunteer "happy hour" event kicked off with updates from Melissa Rudinger, Justin Barkowski (both from our D.C. office regulatory side), Tom Chandler of the Central Southwest Region and myself. If you attended, thanks again! We want a strong ASN volunteer program, so if you are interested in volunteering at an airport, please let me know.

Being in the region, visiting different airports and speaking with pilots gives me a good perspective on local issues. Sometimes the large national issues get the attention, but

what matters to most fellow pilots is what happens next door.

On a regional level, the legislative season is over and I am happy to report that in Ohio, funding for GA airports remained stable and for 2018 and 2019, $12 million will be invested in Ohio's GA airports. Also in Ohio, there is legislation to create an "Aviation Hall of Fame," and being the home of the Wright Brothers, I expect full support in the statehouse this next session.

In Michigan, the sales tax exemption for parts and labor on aircraft stalled in committee, but the outlook is positive for the next session. This will be a welcomed sight for maintenance shops to rejuvenate their businesses. If you live in Michigan, I urge you to contact your state representatives and ask them to support MI HB 4350 and HB 4351.

A coalition (Coleman A. Young International Airport Education Association) at Detroit City Airport (KDET) has formed to educate the public and city officials on the value of the airport. KDET has been shunned by current and former city administrations, leaving the door open to speculation of what could become of the airport. Aside from upkeep concerns, the City of Detroit has hired a consulting firm, GRA, to conduct a study on the value of the airport. The coalition's goal is to keep the airport open and viable. As of now, a majority of Detroit City Council members are in favor of the airport, but cannot commit to making a large investment until this study is completed in December. AOPA and the National Business Aviation Association (NBAA) are providing resources to the group. If you have an interest in KDET, please contact me and I will get you in touch with the coalition leadership.

As part of my duties as an AOPA regional manager, I, along with Eastern Regional Manager Sean Collins, attended the National Conference of State Legislators in Boston, Massachusetts. This was a great networking opportunity, and we were able to seek out legislators from across the nation and have discussions on AOPA initiatives.

Following the conference, we made time to visit a gem of an airport in Stow, Mass., called Minuteman Airfield (6B6). Privately owned, but open to the public, this airport personifies homegrown aviation. If you are ever around Boston, stop in and see it for yourself. Nearly 80 based aircraft and airport improvement projects underway, makes this airport the envy of everyone. Oh yeah, there is a great little diner on the field, as well.

I will be busy gearing up for the 2018 legislative sessions and attending conferences in Michigan, Wisconsin, and hopefully NBAA in Las Vegas. Of course, I will be looking forward to the autumn flying season and the opportunities that await, including the pumpkin pie at Urbana-Grimes Field (I74), Urbana, Ohio. Again, please do not hesitate to contact me at **kyle.lewis@aopa.org** with any questions or for assistance. I am here to serve you! ❑

Certification Speed-Up

by Dr. Bill Blank, M.D.


Dr. Bill Blank

In early December, I spoke at an Aviation Medical Examiner (AME) refresher course in Tucson. There, I picked up some information, which has probably escaped notice and is significant to pilots.

An AME has three options with each exam: pass, defer, or deny. We are never supposed to deny. In the past, we have always been told, "if in doubt, defer." Recently the emphasis has changed. Now, the recommendation is to defer only if absolutely unavoidable. This is the result of a policy issued by the soon-to-retire Federal Air Surgeon James R. Fraser to cut down certification delays. He realized that a certification "speed-up" could only be attained by better utilization of AMEs. His goal is to have 95% of airmen certified on the first visit to the AME. The previous rate was 85%. The FAA has actually attained 97%!

How has this been accomplished? By empowering AMEs to initially issue for many conditions, which previously required deferral. The emphasis is now on giving more responsibility to AMEs. AMEs have been given worksheets, such as the CACI (Conditions-the-Ame-Can-Issue) worksheets for various conditions. In the past, certification requirements were almost a secret, and certification authority was closely guarded in Oklahoma City. Think about the list of "approved medications" which previously, DID NOT EXIST! Of course, it always did.

Why was this change made? It was the result of pressure from pilots, AMEs, pilot advocacy groups, and Congress to cut down certification delays. Conscientious forward-looking FAA physicians, both in Oklahoma City and Washington, were also looking for solutions. Doctors Judith Frazier and Richard Carter come to mind. There was, of course, some internal FAA resistance, which needed to be overcome.

I want to talk about CACIs. There are currently 16 CACI conditions with worksheets with more to come. The worksheets all have many things in common. The condition must be stable. If any medications are used, they must be approved. There must be no side effects. Treatment for cancer must be over. In several conditions, there may be several varieties of the condition. In this case, you must have one of the varieties approved for CACI issuance. If all of the answers on the worksheet are correct, the AME can issue the certificate on the day of the exam. He retains the worksheet in his records, but does not need to submit it to the FAA.

How will the AME know the answers to the questions on the worksheet? I recommend printing out the worksheet, writing your name on the top of it, and taking it to your treating physician. He can complete his portion, sign and date it. An alternative would be to have him write a letter covering the same questions. I recommend using the worksheet. That way you know that all of the questions have been answered. It is faster too. Your physician can complete it while you are there, rather than dictating a letter, having it typed, mailed, etc. Remember that the date on the worksheet must be within 60 days of your visit to your AME. If your condition cannot be certified via the CACI process, in many cases it may be possible via the Special Issuance process.

When you have time, Google *FAA CACI Worksheets.* Click on a few of them and read them. Then, I think that you will have a better understanding of the process. Hopefully, you will never need to use one.

Now, the bad news… In spite of all these changes, there is an insufficient number of FAA Medical Review Officers in Oklahoma City. As a result, uncomplicated Special Issuances are taking about two months after all of the data has arrived. This is even with some of the Medical Review Officers working 10-hour days trying to cut down the backlog. A knowledgeable AME can frequently find a way to speed up the process. As I close, here is a tidbit: what is meant by APPEER? That is FAA talk for "Alternate Pilot Physical Exam and Education Requirement!" It is the name the FAA has given to certification via the Pilot's Bill of Rights 2. The FAA looks at it as essentially another worksheet.

I hope this article is helpful in speeding up your airman certification.

Comments to this article and others are always welcomed via email at info@midwestflyer.com.

EDITOR'S NOTE: William A. Blank is a physician in La Crosse, Wisconsin, and has been an Aviation Medical Examiner (AME) since 1978, and a Senior AME since 1985. Dr. Blank is a retired Ophthalmologist, but still gives some of the ophthalmology lectures at AME renewal seminars. Flying-wise, Dr. Blank holds an Airline Transport Pilot Certificate and has 5600 hours. He is a Certified Instrument Flight Instructor (CFII), and has given over 1200 hours of aerobatic instruction. In addition, Dr. Blank was an airshow performer through the 2014 season, and held a Statement of Aerobatic Competency (SAC) since 1987.

EAA AirVenture Oshkosh 2017 – "The Year of the Bomber"

by Jim LaMalfa

Prior to the opening of EAA AirVenture Oshkosh on Monday, July 24, 2017, the movie directed by Christopher Nolan, "Dunkirk," opened on Friday, July 21st worldwide. Nolan used real Spitfires, Me109s and a Heinkel He 111 twin-engine bomber to depict one day in the air battle over the beach at Dunkirk, France in May 1940. The air combat sequences are the closest thing to actually being in the cockpit of a Supermarine Spitfire, dogfighting German aircraft with fuel running low.

B-25 Mitchell Bomber
James LaMalfa Photo

Great, but EAA pulled off an even greater reenactment at the Tuesday, July 25th airshow. They honored the attack of April 18th, 1942, 75 years ago by 16 U.S. Army Air Forces (USAAF) B-25 North American Mitchell bombers just months after the Japanese attacked Pearl Harbor on December 7, 1941. The B-25s took off from the deck of the Navy carrier *USS Hornet*. In order to give some credence to modern-day folks not around in 1941, the airshow directors had 16 private and Commemorative Air Force-owned B-25s take off south on Runway 36/18, form up and attack the runway from all points of the compass as the Air Corps bombers did to confuse the Japanese gunners around Tokyo. The defensive gunners were not only taken by surprise, they had been told by the emperor and war party that enemy aircraft would never appear over Japan. The 16 Mitchell bombers not only caught the Japanese napping, but changed the course of the war in the Pacific.

The attack by America on the Japanese homeland shocked the emperor and war party and caused Admiral Yamamoto to rapidly implement a plan to attack and land troops on Midway Island, in preparation for an attack on Hawaii and the west coast of the United States. In fact, U.S intelligence had broken the Japanese code and knew their armada was planning an assault on Midway with the goal of destroying all the remaining U.S. carriers, which were at sea on December 7, 1941. Alerted to the Japanese armada, U.S. dive bombers found four Japanese carriers on June 4th, 1942 and sunk them in four minutes – Akagi, Kaga, Soryu and Hiryu. The U.S. lost one carrier, the Yorktown. One Army Air Force pilot of the Doolittle Raid, 101-year-old Dick Cole, Doolittle's first officer, and Doolittle's grandchildren, were honored by EAA on Tuesday evening at Theater in the Woods.

Witnessing the flight of 16 B-25s at the airshow on Tuesday, July 25th, was both a sensory and visual experience. Attacking from all points of the compass, the sound of the twin-engine bombers literally washed over us as they would have over the crews of the wave-hopping Mitchells from the USS Hornet in April 1942. Two B-29s, "FiFi" and "Doc," a recently rebuilt B-29, flew through the black mist from smoke bombs planted along Runway 36/18. It was a history lesson for the young and old; the enemy may change, but America must be vigilant now and repel hostiles, be they hackers or spies with all due rapid response.

U.S. Air Force B-1 Lancer Bomber
Dave Weiman Photo

Other bombers on Wittman Regional Airport were a U.S. Air Force B-1, B-17s, a Consolidated B-24, and later in the week, a B-2 bomber was scheduled to do a fly-over. Parts of

the B-24 were manufactured at the Lloyds plant in Menominee, Michigan during World War II, trucked to Ford's Willow Run factory, mated with other components, and every 63 minutes, a B-24 rolled out of the plant.

Grumman F8F "Bearcat" painted in 1946 Blue Angels colors. The team flew the aircraft from August 1946-49. *James LaMalfa Photo*

Bell P-63 "Kingcobra"
James LaMalfa Photo

The north end of Wittman Regional Airport featured warbirds and trainers of all ilk, some rare indeed. Two beautifully restored Grumman F8F Bearcats were tied down on the flightline, along with three Bell fighters, one Bell P-39 Airacobra, and two Bell P-63 Kingcobras. One of the Bearcats was panted like the U.S. Navy Blue Angels used in 1946. The Blue Angels performed on Saturday for the first time at Oshkosh.

The P-63 Kingcobra marked "TEST" had the panel ahead of the pilot's cabin open displaying its 37mm cannon, the barrel of which ran through the spinner. Designed in the late 1930s, the P-39 was innovational for its day, but its normally aspirated 1710 Continental straight-line engine did not give adequate performance above 20,000 feet. However, it performed well enough with the Cactus Air Force on Guadalcanal, and thousands were handed over to the Russians who used them against German panzers (tanks) with devastating effect. The P-63 was an attempt to correct deficiencies in the P-39 by installing a turbo charger, Rolls Royce Merlin engine, and making aerodynamic improvements. The Army Air Forces, however, declined to order the P-63 in favor of the P-51 Mustang. But Russia did order the aircraft for use on the eastern front against German tanks.

Both the P-39 and P-63 are ancestors of the U.S. Army's Fairchild Republic A-10 Thunderbolt II used in operation "Desert Storm." Two A-10s known affectionately as "Warthogs," did a low-speed flyover before the Doolittle event.

At 1:00 pm, two versions of the P-51 Mustang named in honor of "Old Crow" were featured in Warbirds Circle, as well as a Douglas A-20 Havoc. Old Crow was flown in World War II by Bud Anderson, a triple ace pilot.

The airshow began at 2:30 pm in ideal weather with aerobatics performed by some of the best airshow performers in the business. Also flown was the prototype of the new Stratos VLF very light jet. Stratos weighs 8400 lbs, and cruises at 41,000 feet at 400 kts with a 1500 lb. load. The company is looking for investors and may offer the aircraft as a kit. It has a centerline thrust jet engine.

The warbirds segment of the airshow began with flybys by World War II "Grasshoppers," light aircraft made by Piper, Cessna and Aeronca, which were used for liaison and artillery spotting. The Piper J-3 Cub, renamed L-4, could take off from a platform attached to an Army truck and land on the same platform. The last dogfight between the USAAF and Luftwaffe occurred in May of 1945 between an L-4 and German Fiesler "Storch." The German aircraft was downed by the L-4 crew using their Colt 45 side arms. Other aircraft in the review flying in mass formations were North American T-6 Texans and Beechcraft T-34 Mentors. The airshow concluded with a formation flight of four aircraft – a state-of-the-art Lockheed Martin F-35 Lightning II, a Fairchild Republic A-10 Thunderbolt II "Warthog," and two North American P-51 Mustangs.

Aerobatic performers featured Skip Stewart flying Prometheus 3, Sean Tucker flying the Oracle Challenger II, Bob Carlton flying the Subsonex JSX-2 minijet, and Manfred Radius flying a Glasflügel H-101 Salto aerobatic glider.

Light Sport Aircraft Welcome New Kid On The Block

Just inside the main entrance to EAA AirVenture 2017, I stopped to chat with Brad Majari, U.S. spokesman for Pipistrel Aircraft (means "Bat" in Latin and Italian). Majari explained that the aircraft is manufactured in Slovenia, but due to restrictions placed on aircraft manufacturing, was only flown at night in the 1980s; hence, the first hang gliders were called "Pipistrel" bats. They can be purchased in any configuration a buyer wants, including powered glider with the ability to change prop angles to neutral via the air stream for low drag. The aircraft can be purchased with a brushless electric motor or Rotax 912 80 or 100 hp gasoline engine that burns 3.2 gph, and uses 100 octane low lead avgas or auto gas.

Pipistrel "Virus SW"
James LaMalfa Photo

The Pipistrel Virus SW, which is fabricated in Slovenia and then moved across the Czech border into Italy, is made of carbon fiber and Kevlar. The "Virus SW" version with a 100 hp engine has changeable components. The wing can be changed to glider or cruise configuration performance by unplugging the tips to change span. All Pipistrel models have ballistic parachutes. Price for most models is around $100,000 U.S., but adding ADS-B capability transponders would be an additional $3,000. The electric powered version includes a charger and yields a full charge in one hour. The smart charger talks to the battery for maximum efficiency.

The Swiss company, Pilatus, showed off their latest corporate propjet, as did Piper, Cessna and Beech. Cirrus was very much in evidence. Cirrus has delivered eight Vision Jets to date. The components for the Vision SF50 jet and SR22 are manufactured in Cirrus' Sioux Falls, South Dakota plant, and transported to Duluth, Minnesota for assembly. Nearby was the latest product from American Champion Aircraft of Rochester, Wisconsin, the High Country Explorer. Enstrom Helicopter of Menominee, Michigan, showed up with several models, including one with a night vision sensor mounted under the cabin.

Cirrus Vision SF50
James LaMalfa Photo

Boeing Square, Airshow Central

Since AirVenture 2017 was deemed the "Year of the Bomber," it was not surprising to see the supersonic, variable-sweptwing, Rockwell B-1 Lancer bomber on the field. The aircraft was used over Afghanistan, according to the pilot I spoke with, but is being phased out. Just to the left sat a brand spanking new Boeing B-29, "Doc," rebuilt by former employees of Boeing in the Wichita plant. Found in 1987 by Tony Mazzolini, rotting in the Mojave Desert, the aircraft has been completely restored.

Boeing B-29 Superfortress "Doc"
James LaMalfa Photo

In February 2013, a group of Wichita aviation enthusiasts and business leaders, led by Jeff Turner, formed the organization, "Doc's Friends," a nonprofit board to finance the rebuilding of the historic aircraft. The results showed up at Boeing Square, AirVenture 2017.

Jeff Bezos of Amazon.com displayed his "Blue Origin" rocket booster.
James LaMalfa Photo

Absolutely awesome! Doc and FiFi took part in the Tuesday Warbirds Airshow, along with the 16 B-25s, as I mentioned earlier. Also on display was "Blue Origin," with convention-goers nestled inside, no doubt dreaming of space. Hmmm, looks like fun!

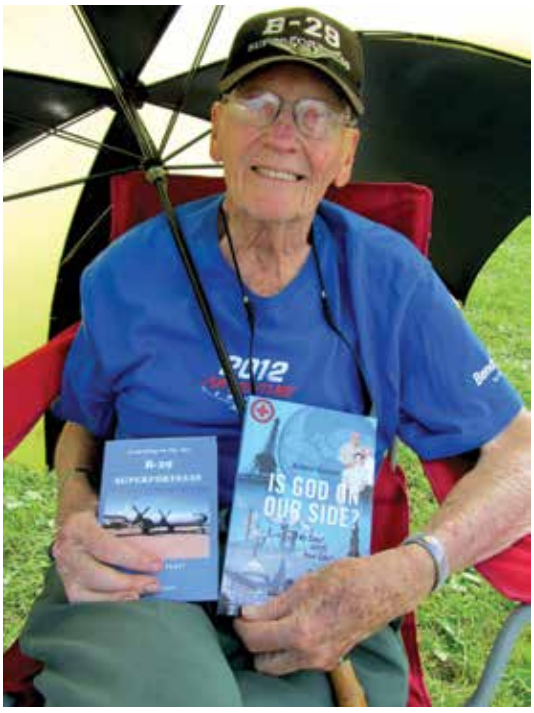
Once again, aided by near perfect weather, EAA's convention planners pulled off another great AirVenture with around 2,200 show planes, 10,000 aircraft, a crowd of 550,000 for the week, with the grounds packed for Sunday's "Tora, Tora, Tora" airshow.

Planning for EAA AirVenture Oshkosh 2018 is already underway! ❑

A Congressional proposal to privatize the air traffic control (ATC) system was the hottest topic at EAA AirVenture Oshkosh 2017, with the leaders of four of the largest national aviation organizations holding a rally, July 25, to discuss the issue with pilots. Leading the rally was (L/R) EAA Chairman Jack Pelton; AOPA President & CEO Mark Baker; the President of the National Business Aviation Association (NBAA), Ed Bolen; and the President of the General Aviation Manufacturers Association (GAMA), Pete Bunce. The discussion was very open and to the point. PELTON: "They (the airlines) want to take infrastructure and privatize it. Long-term financing of the FAA is what they want to fix," and there's better, less expensive ways to do this than to create a monopoly out of the ATC system. BOLEN: "The airlines want economic power, control and domination." BUNCE: "Congressman Bill Schuster (Chairman, House Transportation Committee) says that general aviation is wasting money. Not true! General aviation pioneered ADS-B and WAAS for modernization. The airlines don't have it because they did not want to pay for it. In a heartbeat, we can have user fees based on a radar blimp, not based on weight and class of aircraft." BAKER: "If ATC is privatized, the fees would be huge, and we would be charged for every IFR flight… every landing. Small airports like Oshkosh would suffer." Following the presentation, pilots signed a giant petition to send to Congress to urge the House of Representatives to VOTE NO to H.R. 2997. Another panel discussion, which included Pelton, Baker and Senator James Imhoff, was held July 29. *Dave Weiman Photo*

Sharon Thiry of Cadzand, Holland, spent the summer in the United States with her boyfriend, Huub van Iwaarden, to learn to fly and to purchase an aircraft. Thanks to her flight instructors, Ed Escallon and Mike Wild of Wild Aerobatics (www.wild-aerobatics.com), Kokomo Municipal Airport, Kokomo, Indiana (KOKK), they located this 1943 Aeronca L-3 Defender at nearby Glenndale Airport (8I3) — also in Kokomo, Indiana. Thiry and Escallon flew the plane to Oshkosh for the experience, and to display it in the vintage aircraft area. After they completed their flight training, Thiry and van Iwaarden had the aircraft shipped to Holland. *Dave Weiman Photo*

Honda Aircraft Company displayed it Honda HA-420 HondaJet at EAA AirVenture Oshkosh 2017. Representing the company was (L/R) John Lowe of HondaJet Midwest, Des Moines, Iowa, and Douglas Danuser, Vice President of Sales and Marketing for Honda Aircraft Company, Greensboro, North Carolina (www.hondajetmidwest.com). *Dave Weiman Photo*



World War II B-29 pilot and author, Richard Thomsen of Manitowoc, Wisconsin, enjoyed the afternoon airshow at EAA AirVenture Oshkosh featuring the B-29s "Doc" and "FiFi." Thomsen wrote the book "Learning to fly the B-29 Superfortress," and "Is God On Our Side." Thomsen is a graduate of the University of Illinois with a degree in Mechanical Engineering. During his career, he was an officer and on the board of directors of several large firms, and started two successful small businesses – the last sold aircraft kits in Wisconsin and Illinois. Thomsen built two kit aircraft – "One for show, and one for go!" *Dave Weiman Photo*

Bob Brock, Deputy Director of the Division of Aviation, Kansas Department of Transportation, assisted visitors at the National Association of State Aviation Officials (NASAO) pavilion at EAA AirVenture Oshkosh 2017. There are 138 public-use airports in Kansas – seven commercial airports and 131 general aviation airports. In aggregate, airports, aviation manufacturing and airport/aviation jobs account for $20.6 billion in economic activity in Kansas. *Dave Weiman Photo*

EAA OSHKOSH–AIRVENTURE 2017 is now history. The record books are bulging with statistics testifying to an incredible, record year.

One of the most wildly popular attractions was the "Warbirds Adventure Discovery Tour." AirVenture 2018 is just around the corner, and the tour is planning big upgrades in its capacity. This means they will need more man/woman power to run every aspect of this attraction.

The tour is seeking warbird-lovers to act as drivers, narrators, briefers, membership officers, HQ support, security/crowd control and more. Don't miss out on the warbird fun and excitement at AirVenture 2018. Be part of the hottest, most dynamic attraction.

"OSHKOSH WARBIRDS ADVENTURE DISCOVERY TOURS." Apply now to join the party!! Call/text Vic Krause at 630-440-2018 or email vakrause@me.com

Scott "Scooter" Yoak, pilot of the P-51D Mustang, "Quick Silver," with Alyssa Connell of "runway THREE-SIX" at Connell's booth at EAA AirVenture Oshkosh 2017. Runway THREE-SIX began partnering with Yoak this year because they believe in his mission to support our nation's veterans. Yoak and his father restored the aircraft before his father passed away from cancer. The Quick Silver Mustang is a celebration of our nation's armed forces. Every aspect of the paint scheme represents those who have served, and those who gave the ultimate sacrifice. For additional information, go to quicksilvermustang.com and runwayTHREESIX.com.

Piper's Deliveries & Revenue Continue Upward Trend In Q2 2017

Piper President & CEO, Simon Caldecott, with an M600 at EAA AirVenture Oshkosh 2017.
Dave Weiman Photo

VERO BEACH, FLA. (July 24, 2017) – Piper Aircraft Inc. has announced its aircraft sales and delivery results for the second quarter of 2017, ending June 30. The company continued to grow its new aircraft deliveries and revenue with sales of turbine, M-Class products leading the company's performance success. Additionally, Piper trainer sales growth is being led by the proven Archer platform with a sales backlog into Q3 2018.

The company posted quarterly revenue of $52.1M and deliveries of 32 aircraft. Compared to the company performance in 2016 through Q2, Piper Aircraft sales revenue has increased $10.7M year over year, which represents a 26% increase. Additionally, Piper product deliveries have grown by 13 units, when compared to the same period in 2016, which is a 30% increase. Piper Archer deliveries continue to rise with more than three times the units delivered vs. 2016, registering a 228% increase.

"Our commitment to a common sense, made-to-order approach, has been a key differentiator and is contributing to Piper's success in this 'new normal' market that we are all talking about. Our business model is made possible by our dedicated, experienced workforce, world-class/full-service dealer partners, and a stable, long-term focused ownership body," said President and CEO, Simon Caldecott. "As we look forward to the second half of the year, we anticipate continued strong performance across our product line with a strategic focus on both Europe and Latin America.

Simon Caldecott continued: "The addition of the class-leading M600 continues to drive revenue growth. Additionally, the demo tour of Europe and Africa has resulted in better than expected sales, with five aircraft sold today and several more pending. Furthermore, Piper's offering of the only complete trainer product line is helping further augment sales and long-term commitments from some of the world's leading flight training programs." ❑

The EAA/DAHER International Scholarship Experience

by Michelle Peterson

Seven weeks, three countries, two world-renowned airshows, and experience working at a top-tier aviation manufacturer... How does one begin to describe the experience of a lifetime?

In April of this year, I was notified that I was one of the EAA/DAHER International Scholarship finalists. For those unfamiliar with the program, the scholarship program is a seven-week, all-expenses-paid internship offered to one male and one female student. The finalists are college juniors or seniors who are intending to pursue a career in aviation upon graduation. The internship begins in Tarbes, France, interning at the Daher facility, and is followed by a week helping the company at EAA AirVenture Oshkosh in Oshkosh, Wisconsin. While in France, interns are also provided a side trip to the Airbus headquarters in Toulouse.

Though Daher has involvement with Integrated Logistics, Nuclear Services, Valves, and Aerostructures & Systems, this internship is offered through the Aircraft Manufacturing (Airplane Business Unit) of Daher, which has a rich history. With roots from Morane-Saulnier, and the more recently known SOCATA, Daher is considered the world's oldest aircraft manufacturer in operation today.

Currently, Daher produces the TBM 910 and 930. Often compared to the Piper Meridian or Pilatus PC-12, the newest TBM model – the TBM 930 – is currently the world's fastest single-engine turboprop. A turboprop allows for high-speed travel, without the high operating costs of a jet. Both the TBM 910 and 930 are produced at the Tarbes, France facility, where the internship is located. Often along my walk from the parking lot to my building in the morning, I was able to see the newly manufactured aircraft being put through production tests and inspections.

During my time with Daher, I was involved with the Customer Support Department. My main projects involved the creation of documentation on the data parameters and data flow through the TBM aircraft. Though I also had other projects, they were leading edge, and therefore, confidential.

My average day of interning began by greeting my coworkers with a "Hello" or "Bonjour," and either a simple handshake or the French *bise* greeting. Afterwards, I would make my way to my desk and begin work. Often after arriving for the day, we would take a coffee or espresso break, and then around noon, we would make our way to the company cafeteria. While at the cafeteria, one could find a variety of plats du jour (plates of the day), homemade rolls, salads, cheeses, desserts, or my personal favorite, the complimentary espresso. After lunch, we would make our way back to the Customer Support building, and continue working until it was time to call it a day. Since Daher generously provided a

Michelle Peterson

Peugeot for Nathan (the male intern) and I to use throughout our stay in France, we would often drive to a local town to explore, or find a trail to hike following our day at work. Thanks to the sun not setting until around 9:40 pm, we often felt like we had an entire extra day after work.

The first weekend Nathan and I were in France, we chose to road trip along the French Mediterranean coast. With stops in Carcassonne (a famous medieval city), Béziers (a historic city), Arles (an inspiration place for Van Gogh), and Sete (a city along the Mediterranean), we made our way to Marseille. A highlight of this weekend was hiking to Calanque de Sugiton and swimming in the beautiful turquoise waters of the Mediterranean.

Upon returning to work the next week, we were able to take a factory tour at the Daher manufacturing facility. This tour allowed us to see the manufacturing of landing gear doors (A380, A350, A400M, Gulfstream G500, G600), pylon secondary structures (A350, A330, A320), nacelle and engine structures (A350, Pratt & Whitney), air distribution systems (ARJ 21, MRJ 70/90, CRJ 700/900/1000, A330, A380), nose sections (A380), belly fairings (A320, A330, G500, G600), wing structures (F900, F2000, ATR 42, ATR 72), fuselage central sections (Falcon 5X, 7X, 8X), tail structures (H130, H160), airframes (H120, H130), and all stages of the TBM 910 and 930. The tour was done in small groups, which allowed for a more personalized tour, and many opportunities for questions to be answered.

Our second weekend, Daher provided us with the opportunity to attend the International Paris Airshow (Salon International de l'Aéronautique et de l'Espace) at Paris-Le Bourget Airport. Although I knew the show to be more well-known as a trade show than an event for the general public, such as EAA AirVenture Oshkosh, I was surprised with the extent of the formality and business presence. Even though we attended the show on a Saturday and Sunday, which were days when the general public was allowed to attend, this higher level of formality was still noticeable. Most of the aircraft were only accessible to individuals attending the show through businesses or through an association with an exhibitor. Since Daher manufactures components for Airbus and Dassault, we were fortunate to be able to visit both of their exhibits, and tour an A380, A400, H130, and the fuselage of a Falcon.

During the third week of our internship, my coworkers organized a fly-out barbecue. After work, we went to the aéroclub, and flew an Aeroprakt A-22 ultralight, and two Rallye (a SOCATA-manufactured light aircraft) to a grass airstrip, a short flight from Tarbes. This airport happened to be where one of my coworkers hangared his own aircraft. After arriving at the hangar and unloading the planes, my coworker offered to take me up in his homebuilt Acroduster Too – a classic aerobatic, open-cockpit biplane. Without hesitation, I accepted. This was my first aerobatic flight, and it was fantastic! We did a roll, several loops, and even a couple of hammerheads. Upon landing, the grill was fired up, and we enjoyed grilled sausages and kebabs, baguettes, chips, nuts, cheese, and a torte. From the flights to the meal and the time spent with my coworkers, it was, by far, one of my favorite experiences during the internship.

As we came to our third weekend, Nathan and I decided to make our way to the Basque region, located along the French Atlantic coast. Though it rained most of the time we were there, we did have the opportunity to visit Bayonne (the chocolate capital of France), Biarritz and St Jean de Luz (French Atlantic coastal cities), Sare (a traditional Basque village), and San Sebastián (a Spanish Atlantic coastal city).

During the next week of our internship, we had the opportunity to travel to Toulouse to visit the Airbus facility. While at Airbus, we visited the Airbus museum, where we were allowed to walk through a retired Concorde, and took a tour of the A380 final assembly line. While on the A380 tour, we were able to learn the various locations where the aircraft components are manufactured (including the Daher facility in Tarbes!), see how the components are transported to Toulouse, and view the final assembly process from an observation deck. The observation deck for the tour overlooked an enormous hangar containing three A380s parked side-by-side. It wasn't until I spotted a seemingly microscopic person walking on the ground that I was able to truly grasp the size of the aircraft.

As our fourth and final weekend approached, we made our way south, stopping at the Gorges de Kakuetta in the Pyrenees mountains, en route to Pamplona, Spain. While in Pamplona, we did take part in the San Fermin Festival and ran with the bulls. Though exciting and adrenaline rushing, this is something I will likely refrain from repeating. On the return route from Pamplona, we made stops along Col d'Aubisque (a famous route for the Tour de France), Sainte-Engrâce (a stunning region within the Pyrenees), and the Cirque de Gavarnie (a geologic limestone bowl with a towering waterfall).

Towards the end of our internship, we were given the opportunity to fly in a TBM with one of the company test pilots. Accepting without hesitation, we made our way to the ramp. After taking off from Tarbes, we quickly rose to flight level 220. Shortly after ascending, the pilot informed Nathan and I that a Dassault Rafale from the French Air Force would be trailing our 6 o'clock and meet up with us soon. Sure enough, a Rafale pulled up along our left wingtip. After the Rafale departed, the pilot demonstrated the aircraft's maximum descent rate, steep turns and stalls, and then flew down through the Pyrenees Mountains before returning to Tarbes.

Once our time in Tarbes came to an end, we traveled back to the U.S. and met the company at EAA AirVenture Oshkosh. Throughout the week, we helped with tasks at the Daher booth, and had opportunities to walk around the show grounds. Though we had spent the previous six weeks with our coworkers, Oshkosh was a great opportunity to get to know our coworkers better, as well as meet some of the TBM distributors, owners, and operators. Experiencing Oshkosh with Daher and the TBM community was the perfect end to a phenomenal internship.

Continued on Page 62

Wheels & Wings – A Year In The Making!

by Dave Weiman

OSCEOLA, WIS. - It's an air show, it's a car show, it's a motorcycle show, it's a fly-in, it's *Wheels & Wings* at L.O. Simenstad Municipal Airport in Osceola, Wisconsin!

The highly popular event started as a promotion by Motorbooks International, publishers of automotive and aircraft publications. When Motorbooks closed their Osceola facility, the tenants at the airport, and local businesses and organizations, took over producing the event in which planning begins a year in advance.

The North American Flight Team, "Triple Play."
Dave Weiman Photo

The Car and Motorcycle Show is coordinated by Stardust Car Shows, with over 700 entries. Attendees this year were treated to music from the 1950s as they perused the classic and vintage cars, hot rods and rat rods, muscle cars, and motorcycles. A variety of aircraft were also on display, including a Vietnam-era UH1-H "Huey" helicopter owned by Dave Schmitz and hangared at the New Richmond, Wis. airport.

A temporary control tower and ground control controlled approximately 100 airplanes that flew in. The first 75 pilots in command received breakfast at no charge! The airshow featured the Wissota Sky Diving Team; the North American Flight Team "Triple Play," flying T-6 Texans; the Vanguard Squadron flying three RV-3s; Eric Edgren in his Taylorcraft; Mike Weinfurter in his L-19; and Grant Neilson performing in his CAP 232. Once the air show was over, a "Radar Run" clocked the speed of dozens of cars and trucks as they sped down the runway.

The 2017 Kid Zone included the Imagination Playground. A food and beer garden included several local vendors and merchants. To close out the fly-in, a Golf Ball Drop helped raise money for the Lions Club.

The event is free to the public, thanks to sponsorships by local businesses and civic organizations, including Osceola Aero Sport, Gibson Aviation, Custom Fire, Dick's Fresh Market, Frontier Ag & Turf, J&S Contracting, Safety Signs, The Sun Newspaper, Osceola Chamber/Mainstreet, the Christian Motorcycle Association, Osceola Community Fair, Village of Osceola, Osceola Public Library, Osceola Area Lions Club, Osceola Boy Scouts, and the Osceola Airport Commission.

As soon as the airport activities were over, some attendees visited downtown Osceola to attend the Osceola Community Bazaar, then closed out their day with a visit to the Osceola Community Fair on the north side of town. The fair is an old fashioned local fair and featured a great band that evening.

Located along the St. Croix River, east of the Twin Cities, Osceola has a lot to offer travelers besides fall colors. Visitors can take a train ride at the Osceola Depot, visit Cascade Falls, hike one of the new trails in town, stroll through the boutique stores, and check out one of the great restaurants with patios to dine outdoors, offering a variety of choices from local fare to Chinese and Mexican.

For those not flying or who are staying overnight, they can enjoy a craft beer on an outdoor patio at a local pub or visit one of the area's wineries. Canoe rental is available at Riverwood Canoe Rental and Lakeside Country for a

A Vietnam-era UH1-H “Huey” helicopter on display.
Dave Weiman Photo

Spectators enjoying the airshow.
Dave Weiman Photo

Some 100 aircraft flew in for Wheels & Wings.
Dave Weiman Photo

Jackie and Gene Bergh of Roberts, Wis., with their 1958 C1 Corvette, one of several classic cars they own. Gene is a pilot and also owns a classic 1967 Cessna 180. He enjoyed a career as an aerospace engineer at 3M Company in Maplewood, Minnesota. *Dave Weiman Photo*

Airshow announcer, Wayne Flury, interviews former NASA engineer, Walter Piszczek of Osceola, Wis. Piszczek was the launch preparation engineer for Gemini 7 and Apollo 1 (AS-204). Apollo 1 was intended to be the first manned mission of the United States Apollo program, which had as its ultimate goal a manned lunar landing. The low Earth orbital test of the Apollo Command/ Service Module never made its launch date of February 21, 1967. On January 27th, a cabin fire during a launch rehearsal test at Cape Kennedy, killed all three crew members – Command pilot Virgil I. "Gus" Grissom, senior pilot Edward H. White II, and pilot Roger B. Chaffee – and destroyed the Command Module. It was determined that the source of the fire was an electrical problem. The fire spread rapidly because of combustible nylon material in the module, combined with the high-pressure, pure-oxygen cabin atmosphere. The astronauts' rescue was prevented when the plug door hatch could not be opened against the higher internal pressure of the cabin. The problem was corrected and the first successful manned Apollo mission was flown by Apollo 1's backup crew on Apollo 7 in October 1968. When Piszczek left NASA, he flew Boeing 747s for Northwest Airlines, and when he retired, he had accumulated 24,000 hours. Piszczek served on the Osceola Airport Commission thru 2016.
Dave Weiman Photo

paddle on the St. Croix River or visit to Interstate State Park, which straddles the Dalles of the St. Croix River with a deep basalt gorge with glacial potholes and other rock formations. For the more adventuresome, there’s a new zip line at Trollhaugen Ski Resort in nearby Dresser, Wisconsin.

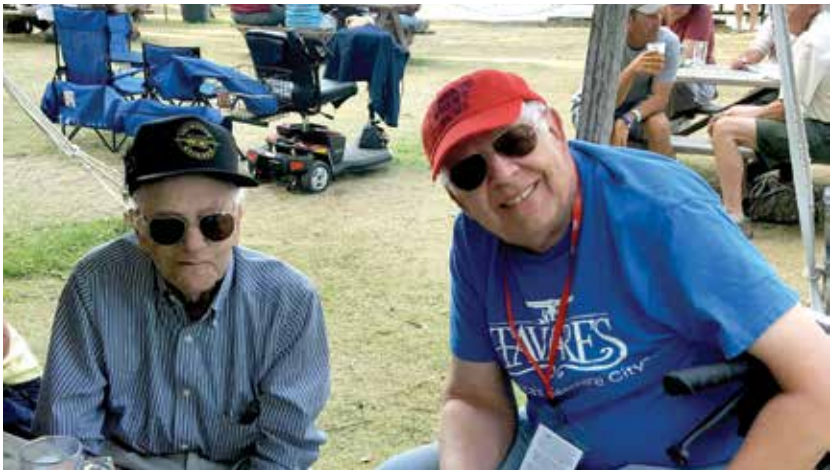
Places to stay include the Pleasant Lake and Lakeside Country bed and breakfasts, and the River Valley and St. Croix River Inns.

Osceola AeroSport has courtesy cars available, including a Mercedes Roadster. Self-Serve 100LL and Jet A is available. For additional information or to reserve a courtesy car in advance, call Richard Johnson at 715-294-4500 (office) or 612-308-0647 (cell).

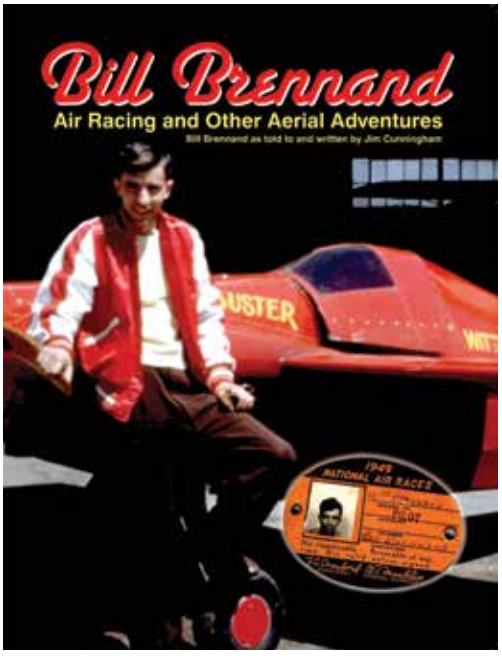
Learn more about what the Osceola community has to offer at **www.wheelswings.com** and remember, the Twin Cities with one of the best reliever airport systems in the world, is just 30 miles away.

Watch for the dates for *Wheels & Wings 2018* in an upcoming issue of ***Midwest Flyer Magazine***. ❑

Remembering An Air Racing Legend



(L/R) Bill Brennand with Mick Kaufman.



by Michael J. "Mick" Kaufman

Bill Brennand, 92, of Oshkosh, Wisconsin, circled his last earthly pylon on March 14, 2017. Bill was a legend in air racing during its golden years, and won the national air races several times in the 1940s flying Steve Wittman's "Buster" to fame. Buster is currently displayed in the National Air and Space Museum in Washington, DC. He also raced planes built by Curtis Pitts.

I am writing this article because Bill was my first flight instructor, and he soloed me in a Champ in 1965 while I was a sophomore in high school. When I first met Bill as a teenager, he was living in a house that he was born in and which happened to be the same house as my great-grandmother had been born in. The house was built by my great great-grandparents in the 1870s after they settled as immigrants.

Bill was a neighbor to his brother, George Brennand, who lived on Oregon Street Road at the intersection with Ripple Road. Turning west from Oregon Street Road onto Ripple Road was a private airport known as Brennand Airport. Bill started a flight school and an aircraft sales business out of this grass strip, and there were more than a dozen aircraft based there with a shop and a Quonset storage hangar. As an early teenage boy, I would ride my bicycle the three miles to watch the activity at Brennand Airport as I felt less intimidated there than at the municipal airport in Oshkosh, which was only a few blocks from my house.

I got my first airplane ride with Steve Wittman himself in a Cessna 172, and knew then that I was destined to learn to fly.

Being a bit on the shy side, I felt intimidated talking to the pilots, but one day I asked a pilot at the airport about flying lessons. The pilot's name was Byron Fredrickson, who was a lifelong friend and business associate of Bill Brennand. Byron took me into the office and introduced me to Bill where I found out it took 40 hours of flight time to get a private pilot certificate, and the airplane cost $6 an hour including fuel, and plus $6 an hour for instruction in a Champ. I lived on the poor side of the tracks and that was a lot of money back then. When I mentioned my desire to learn to fly at the dinner table, my mother said, "you crazy kid…where do you think we will get that kind of money; we barely have enough money for food."

On my next trip to the Brennand Airport, Bill asked me when I planned on starting flying lessons. My response was, "I can't do it because I can't afford it." Bill then offered me a part-time job to offset the cost of flying lessons. He paid me $1.20 per hour, so 10 hours of work got me

one hour of dual instruction. I also worked as a stock boy at a store in downtown Oshkosh where I made $1.10 per hour, and that money went to the family for food. I changed a lot of oil, washed a lot of airplanes, and assisted Jack Wojohn, the mechanic, with dope and fabric work.

Bill was a soft-spoken man, but when he said something, you listened. One of his favorite expressions was the use of the word "we." He would often say, "Today, we will need to wash the airplane, clean the belly and get it gassed up." The word "WE" meant "YOU," or in my case "ME." After a lot of hard work and eight hours and 20 minutes of flight time, working to perfect takeoffs and landings, Bill told me to stop the airplane so he could get out. "Take it around by yourself for three takeoffs and landings. You will notice that it will get off the ground quicker, climb faster and float more on landing." He then walked away, leaving the plane all to myself to do my first solo. A momentous experience all aviators never forget.

As a high school senior, I got my pilot certificate, and no one in my family knew I was learning to fly until I passed my flight test. In the late 1960s, the county decided to expand the north/south runway at the Oshkosh airport and purchased Brennand Airport. The airport moved to Neenah where it still operates today with the Brennand name.

I could write a book on my friendship with Bill Brennand, but for now, I will share a few of my most memorable experiences.

Bill was giving me a check out in a late model Skyhawk, and we were doing some takeoffs and landings at Winnebago County Airport. There was airline traffic operating out of the airport at the time, and jet service had recently been inaugurated at the airport. In those days, the term "wake turbulence" had not yet been coined; rather, it was called prop-wash or jet-wash.

We had just taken off behind a jet airliner, and the Skyhawk started rolling hard to the left. I had almost full right aileron when Bill calmly said, "it's my airplane" as he took the controls, and we did a complete roll to the left about 100 feet off the ground.

Another memorable moment came when I was practicing for a flour-bombing contest in Fond du Lac and one of the local instructors, Otis Bittorf, challenged me to drop a flour bomb with the target being the center of the ramp. Not thinking, I got in my Aeronca Defender with bombardier, Steve Adams. There was no flour around, so we made the bomb out of a bag of sand, gravel and rocks. We missed the center of the ramp, but hit a Stinson parked near the ramp. Upon landing, Bill was looking at the damage to the Stinson. He never said a word, but shook his head. The next trip to the airport, I found that the tie-down ropes on my airplane were replaced with a heavy log chain and a padlock. I never made the flour-bombing contest, but learned a lesson to think before doing something stupid.

I saw Bill at the EAA seaplane base last summer; the base is named in Bill's honor as he once owned it and I was the kid who cut the grass there.

Bill published a book and made a DVD with some of his movies and memories. His book is entitled "Bill Brennand - Air Racing and Other Adventures" by Jim Cunningham. To purchase a copy, mail check or money order to Airship International Press, P.O. Box 1543, Bloomington, Illinois 61702-1543, or call 309-827-8039: $28.95 softbound or $33.95 hardcover.

So long, my friend! ❑

Kaplan Resigns From National Aviation Hall of Fame

DAYTON, OHIO – Ron Kaplan has resigned from the National Aviation Hall of Fame Board of Trustees effective July 31, 2017, citing philosophical differences with the organization's executive leadership. Kaplan had served the Congressionally-chartered non-profit in various capacities since being recruited to join the staff in 1998, including four years as Executive Director. Kaplan leaves his present position of Enshrinement and Outreach Director to expand his aviation and media consulting business.

Over his 19-year career with NAHF, Kaplan is directly responsible for over $5 million in fundraising, including sponsorships, legacy giving, grants and merchandise programs. He most recently led the solicitation of over $200,000 in sponsorships for the upcoming 2017 Enshrinement Dinner and Ceremony in Alliance, Texas, and in June, secured a $250,000 gift from the Scotts Miracle-Gro Company to sponsor the NAHF Learning Center's World War II Gallery.

Further, Kaplan led the 2000 transformation of NAHF's annual enshrinement ceremony into a broadcast-quality stage and video production widely acclaimed as America's "Oscar Night of Aviation." Among the volunteer celebrity-pilot guests and emcees Kaplan was responsible for enlisting to participate include Harrison Ford, Nick Clooney, Dennis Quaid and Ted Williams, among others.

Since formally establishing his consulting business, Reel Stuff Aviation Resources LLC, in 2012, Kaplan has provided a variety of non- and for-profit organizations with event planning, video production, photography, sponsorship, and media relations services. Among his clients are CruiseFlight.com, the Bremont Watch Company, Columbus COSI, the Air Force Museum Foundation, and the Aviation Community Foundation. ❑

New Avionics Manager At Wisconsin Aviation

Aaron Hall

MADISON, WIS. – Wisconsin Aviation, Inc. has named Aaron Hall the manager of their avionics department. Hall began his aviation career in June of 1993 with the United States Navy as an Aviation Electronics Technician. Since then he has held technical or management positions with America Online; Signature Flight Support and Bombardier Aerospace in Florida; Lufthansa Bombardier Aviation Services in Berlin, Germany; Jet Aviation in Dallas, Texas; and Cutter Aviation at Dallas Executive Airport. Hall joined Avidyne Corporation as a technical support engineer in 2007, and in 2013, he moved to Grand Island, Nebraska to become director of avionics and chief inspector.

Hall has a Doctorate of Science in Aviation Technology, and is an FAA Designated Engineering Representative, a private pilot, and is fluent in German.

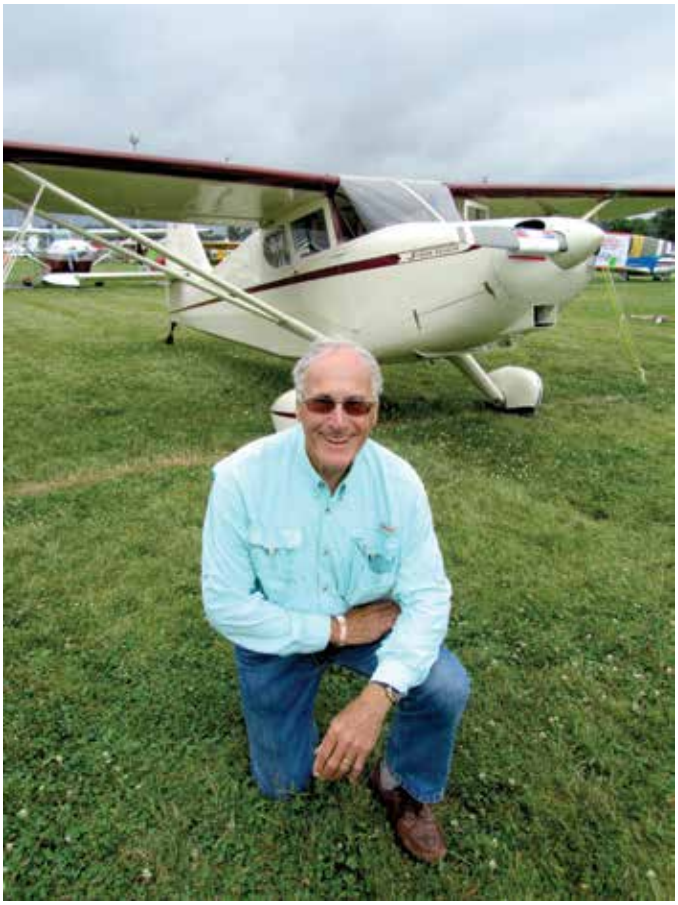
Wisconsin Aviation has operations at Dane County Regional Airport (Madison, Wis.), Watertown Municipal Airport (Watertown, Wis.), and Dodge County Airport (Juneau, Wis.) (www.wisconsinaviation.com). ❑

Wisconsin Aviation Names New Director of Flight Training

MADISON, WIS. - David Upham has been promoted to Director of Flight Training at Wisconsin Aviation. Upham will manage Wisconsin Aviation's three locations: Watertown, Juneau and Madison.

Upham grew up in a house near Timmerman Field (KMWC) in Milwaukee and his earliest airplane memories are of a particular swallow-tail Bonanza flying overhead. Upham first learned to fly at Palwaukee Airport (KPWK), now known as Chicago Executive Airport, in Wheeling, Illinois, while working for a bank in Chicago. He earned additional ratings at Concord Regional Airport (KJQF) near Charlotte, North Carolina (www.wisconsinaviation.com). ❑

One Man's Affection For Stinsons



Tom Janssen with his award-winning 1947 Stinson 108-2 Voyager.

by Dave Weiman

I have known Tom Janssen of Appleton, Wisconsin, for at least 10 years, when I met him at Beaver Aviation at Dodge County Airport in Juneau, Wisconsin, and he joined us on the annual Canada Fishing Fly-Out to Miminiska Lodge, Ontario. Tom is passionate about flying, and over the years, has accumulated a number of aircraft, including a 1978 Piper Arrow III, and has had an interest in vintage Stinsons ever since he was a kid, building model airplanes. For the past two decades, Janssen has owned and restored two Stinson aircraft – one of which he has since sold -- and while a very rewarding experience, it took a lot of work, and cost a leg and an arm, and he doesn't intend to buy and restore any more. But you just never know about Tom Janssen.

"I always liked the graceful design," said Janssen. *"My interest in Stinsons was rekindled at a 1998 New Year's Eve party in Madison, when I met an old law school friend who owned one. After learning of his enjoyment with such an ancient airplane, I decided I would join the action and get a Stinson, myself. Little did I know what an interesting and circuitous adventure this would become."*

The following summer Janssen located an experienced tail dragger instructor. About the time he signed Janssen off, *"perhaps concluding, he didn't want to experience any more thrilling landings in the Cessna 170 he used for training,"* he told Janssen of a Stinson for sale in the Milwaukee Journal Sentinel. *"Everybody looks for airplanes in the local newspaper want ads, right? That's when I found my first Stinson, N8068K, a 1947 108-2 Voyager."*

Janssen flew to the airport where the Stinson was located to view the object of his obsession. The aircraft was recently restored by a "Stinson guru." At least that's how he was described in an aviation publication, so how could Janssen go wrong?

After only 70 hours of flying, the Franklin engine needed a crankshaft.

"The Internet was an incredible resource to aid in the search. I ended up calling or emailing folks from every corner of the country, including Alaska, chasing down leads for a crankshaft. I found one in Oregon, but had to buy the whole disassemble engine. I did. And, for not very much more money, I could buy the whole airframe, which I did." The airframe is N9275K – another 1947 Stinson 108-2.

The first order of business in the restoration of Janssen's newly acquired Stinson was to get an engine, because the crankshaft from Oregon went into his then flying Stinson. As luck would have it, Janssen located a high-time Franklin in New Hampshire. Master mechanic and Wisconsin Aviation Hall of Fame inductee, Chuck Swain, of Beaver Aviation, Dodge County Airport, Juneau, Wis., took the crankshaft from that engine and rebuilt the engine from N9275K to zero time.

In the fall of 2011, Janssen decided that the wings were not worth the time and effort to restore, so back to the Internet he went where he located a nice set of 108-2 wings in Jacksonville, Florida. The wings just happened to be stored in airshow performer, Patty Wagstaff's hangar, which made Janssen's quick-hitting, four-day trip to Florida, a bit more enjoyable!

Janssen's first job, beginning early in 2012, was to clean and strip the wings in his hangar at Appleton International Airport (KATW), which were then stored in a hangar in Iola, Wisconsin (68C). During the rest of that year, and all of 2014, Janssen removed the engine mount, boot cowl, landing gear, and longerons, cables and all pulleys from the fuselage, and began the tedious job of cleaning and stripping the metal parts. In 2016, master craftsmen Mark and Ron Unertl sandblasted and made repairs to the sheet metal, then painted the fuselage with epoxy, installed new wood flooring, cables and pulleys; restored the panel to factory exactness; and installed an Airtex interior, a "hidden" Trig radio system, and an ADS-B out transponder. All instruments were sent to Keystone Instruments, Inc. of Lock Haven, Pennsylvania, to be overhauled.

Tom Janssen restored the instrument panel to factory exactness.

After the fuselage was assemble in late 2016, and the engine was installed, Janssen moved the completed fuselage from Iola to Waupaca (KPCZ), so the wings could be attached and the aircraft readied for its first flight.

"On May 20, 2016, at about 8:00 a.m., N9275K flew for the first time since 1974. What a thrill."

At EAA AirVenture Oshkosh 2016, N9275K won the "Outstanding Stinson Award," which was an award earned by a man who had an affair with an airplane, and several very skilled aircraft restoration experts, who shared his desire to keep 'em flying!

EDITOR'S NOTE: Tom Janssen is a lifelong resident of Appleton, Wisconsin, and has been married for 50 years to his wife, Diana, who supported him throughout his restoration project. The Janssens have three children -- one who is a college professor, one who is a professional pilot, and one who is a professional actor. Janssen has been a pilot since 1974 and is a University of Wisconsin Law School graduate. He practiced law in Appleton for 48 years. Besides flying and restoring vintage aircraft, Janssen is an avid fly fisherman. ❑

Daher Brings Morane-Saulnier Type L Parasol Aeroplane To EAA AirVenture Oshkosh

OSHKOSH, WIS. –- A flightworthy replica of the World War I-era Morane-Saulnier Type L "Parasol" aeroplane – an ancestor to Daher's TBM turboprop aircraft – was showcased for the first time during EAA AirVenture Oshkosh, July 24-30 at Wittman Regional Airport, Oshkosh, Wisconsin.

The vintage aircraft replica is the result of a six-year adventure that started in 2011 with the 100th anniversary of Daher's roots as an aircraft manufacturer. "We decided to exhibit the Type L at Oshkosh in 2017 because this year marks the 100th anniversary of the United States' entry into World War I, which had an enormous influence in the development of aviation," explained Nicolas Chabbert, the Senior Vice President of Daher's Airplane Business Unit, and President of SOCATA North America, its U.S subsidiary.

The replica's construction project is managed by the Association Héritage Avions Morane-Saulnier, whose volunteers – both retired and current workers of Daher and its predecessor companies – brought their energy and passion to this effort. Over 15,000 man-hours went into building the replica.

The replica retains the Type L Parasol's original wooden structure, along with the wing-warping system

and the aircraft's all-flying rudder and stabilator controls.

Since the Morane-Saulnier aircraft was built to fly, modern upgrades were incorporated, including the substitution of a 110 hp Rotec radial engine in place of the original Le Rhone rotary 80 hp engine.

"Giving a 'rebirth' to the Type L represents the excellence in manufacturing and ingenuity that is reflected today in our TBM 910 and TBM 930 aircraft – which are recognized for their performance and quality," Chabbert added.

Bringing the Type L Parasol to Oshkosh also highlights Daher's parent company's logistics expertise in transporting the aircraft from Daher's industrial site at Tarbes, France to the United States. ❑

Daher's Morane-Saulnier Type L at EAA AirVenture Oshkosh.
Dave Weiman Photo

Apollo 11 Command Module Makes Another Journey

Apollo 11 Command Module
Smithsonian Air & Space Photo

WASHINGTON, D.C. – After spending 46 years parked at the Smithsonian's National Air and Space Museum, the Apollo 11 command module "Columbia" traveled again. This time, the journey was not quite as epic as to the moon and back, but the trip is still historic. The spacecraft is visiting Seattle, Houston, St. Louis and Pittsburgh in a new traveling exhibition, "Destination Moon: The Apollo 11 Mission."

Columbia, which the museum has designated a "milestone of flight," transported Edwin "Buzz" Aldrin, Neil Armstrong and Michael Collins to an orbit around the moon in 1969. Aldrin and Armstrong used a detachable landing craft, the lunar module Eagle, to descend to the surface, where on July 20, 1969, Armstrong took mankind's first steps on the moon. Columbia transported the trio back to Earth, where the spacecraft splashed down in the Pacific Ocean four days later.

After the command module was hoisted on to the deck of an aircraft carrier and taken home to the United States, it made a nationwide tour that ended in 1971 when Columbia arrived at the Smithsonian Institution in Washington D.C. Now it will travel to four different museums over the course of two years before the 50-year anniversary of the lunar landing.

Last year, museum staff entered Columbia for the first time in decades. A detailed 3D scan was made of the entire interior to use as part of a digital component of the traveling exhibition, which also includes 20 of the more than 400 objects that were removed from Columbia. ❑

Wipaire Helps Fulfill Aircraft Needs of Mission Aviation Fellowship International

(L/R) Haig Hagopian, Senior International Sales Director at Wipaire; Ed Hawthorn and Phil Snell from Mission Aviation Fellowship International; Chuck Wiplinger, President and COO of Wipaire, Inc.; and Clint Clouatre, Vice President of Marketing and Sales at Wipaire.

OSHKOSH, WIS. – Wipaire, Inc. of South St. Paul, Minnesota, is helping to support "Mission Aviation Fellowship International" by contributing a single-point fuel system at no charge to supplement their purchase of Wipline 8750 amphibious floats for their new Cessna 208 Caravan. The Cessna 208 Caravan is destined for service in Bangladesh, where the single-point fuel system will provide ease and safety when fueling on the floats in remote regions. In addition, Wipaire will install pitch locks for improved handling during docking and startup on floats, along with its exclusive Laser Gear Advisory System, a depth finder and other refinements to tailor the aircraft to the organization's demanding mission. Phil Snell and Ed Hawthorn of Mission Aviation Fellowship International were on hand at EAA AirVenture Oshkosh to join Wipaire officials in making the announcement. ❑

Aeronautics Report

Wisconsin Bureau of Aeronautics
P.O. Box 7914, Madison, WI 53707-7914

David M. Greene, Director
(608) 266-3351

www.wisconsindot.gov

Airport Lights Continued

by Hal Davis
WisDOT Bureau of Aeronautics


Hal Davis

Earlier this year, airline pilots narrowly averted disaster after mistakenly lining up to land on a parallel taxiway at San Francisco International Airport. Other pilots have made the same mistake at other airports. Fortunately, the pilots in this case realized something did not look right and initiated a go-around before it was too late. My guess is that airport lighting played a significant role in that decision.

This article is a continuation of an article on airport lights that began in the August/September 2017 issue of *Midwest Flyer Magazine.* In it, I covered runway and taxiway lights. This article will focus on the remaining airport lights. As the incident in San Francisco teaches us, investing a few minutes to review airport lights today may save lives in the future.

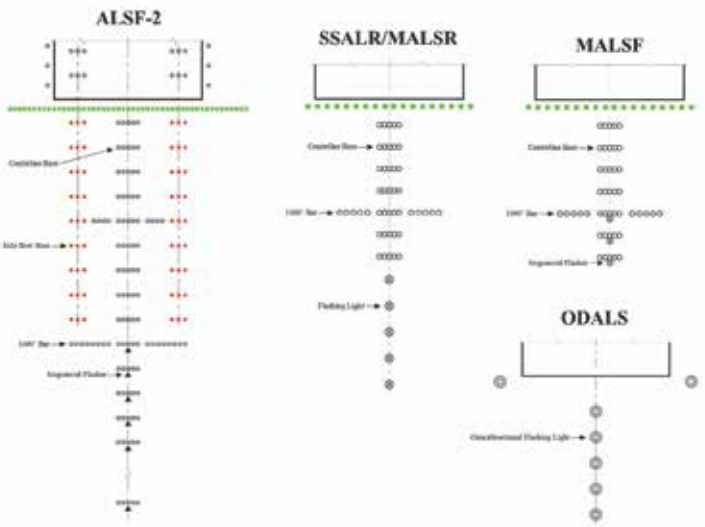
Approach Light Systems

Approach light systems come in a variety of forms, but they all serve the same purpose, to assist the pilot in his transition from instrument flight to visual flight for landing. The specific approach light system relates to the type of corresponding instrument approach procedures for the runway. In general, most systems share many features.

First, a series of light bars are used to extend the runway centerline allowing pilots to align their aircraft with the center of the runway. One thousand (1,000) feet from the runway threshold, additional light bars are installed on each side of the centerline lights to create a line of lights perpendicular to the runway centerline. These lights can be used as a decision point during the approach and serves as an artificial horizon allowing pilots to roll their aircraft wings level with the runway. Beyond the 1,000-foot bar, sequenced flashers or runway alignment indicator lights are used to further illuminate the extended runway centerline.

As you might expect, runways which allow aircraft to land in the worst weather require the most precise approach procedures and the most advanced approach light systems. Currently, the most robust approach light system is the High Intensity Approach Light System with Sequenced Flashers or ALSF-2. An ALSF-2 system utilizes more lights and is of higher intensity than any other approach light systems. In addition to the centerline, 1,000-foot bar, and sequenced flashers, an ALSF-2 system also provides red row bars which essentially extend the runway touchdown zone lights.

Precision approach procedures which do not necessitate an ALSF-2 system may utilize a variety of medium-intensity or simplified approach lighting systems. Examples include:



– MALSR: Medium-intensity Approach Lighting System with Runway Alignment Indicator Lights
– MALSF: Medium-intensity Approach Lighting System with Sequenced Flashing lights
– SALS: Short Approach Lighting System
– SSALS: Simplified Short Approach Lighting System
– SSALR: Simplified Short Approach Lighting System with Runway Alignment Indicator Lights
– SSALF: Simplified Short Approach Lighting System

with Sequenced Flashing Lights

In comparison to ALSF-2 systems, MALSR and MALSF systems provide much of the same information to pilots, however, they do so with fewer and less intense lights. Also, simplified systems, such as a SSALR, are not typically installed as a standalone approach light system. Rather, these systems are a subset of an ALSF-2 system and are utilized when weather conditions do not require the full ALSF-2 system to be turned on.

While all previously discussed approach light systems are designed to illuminate only in the direction of aircraft approaching the runway, Omnidirectional Approach Lighting Systems or ODALS consist of seven flashing lights which can be seen from any direction. Two lights are placed on each side of the runway threshold and the other five lights are positioned along the extended runway centerline. ODALS provide circling, offset, and straight-in visual guidance for runways with non-precision approaches.

Runway end identifier lights or REILs are installed at many airports as a more cost-effective lighting system for identifying a non-precision runway end. They are especially valuable for quick identification of a particular runway end which might otherwise be concealed by terrain or other lighting. REILs consist of a pair of synchronized flashing white lights located in line with the runway threshold and 40 feet from the runway edge.

Visual Glideslope Indicators

Visual glideslope indicators provide pilots with a visual representation of their vertical distance from the preferred glideslope. For most runways, a three-degree glideslope is used. One common example of a visual glideslope indicator is a Visual Approach Slope Indicator or VASI. While there may be slight variations in the number of lights in a VASI system, the same basic principle applies to each. A VASI consists of several light units spaced along the side of the runway. Each unit projects a white-light beam and a red-light beam. A pilot on approach to the runway will see all white lights if they are above the glideslope, or conversely, all red lights if they are below the glideslope. A combination of both red and white lights indicates the aircraft is on the glideslope.

Precision Approach Path Indicators or PAPIs work on the same principle. The primary difference between a VASI and PAPI is that PAPI lights are installed in a single row of two or four light boxes. Again, all white lights indicate the aircraft is too high, all red and the aircraft is too low, half red and half white indicate the aircraft is on the glideslope. Both VASI and PAPI lights have a range of about five (5) miles during the day and upwards of 20 miles at night.

Tri-color visual approach slope indicators are much rarer. They consist of a single light which, depending on the location of the aircraft in relation to the glideslope, appears as amber, red or green. Amber indicates the aircraft is too high, red too low, and green indicates on the glide path. These systems have a much shorter useful range than VASI or PAPI.

Pulsating visual approach slope indicators also normally consist of a single light unit. To indicate an aircraft is too high, the light pulsates white. Conversely, the light pulsates red when the aircraft is too low. Steady white indicates the aircraft is on the glide path, while steady red indicates slightly below the glide path.

Beacons

Beacons are designed to help pilots find the airport at night or possibly during inclement weather. As a result, beacons are most effective when seen from one (1) to 10 degrees above the horizon. Some beacons rotate at a constant speed, while others flash in all directions; the effect is the same. Flashes occur approximately every two (2) seconds or 24-30 times per minute. The color of the light depends on the type of landing facility.

Type of Facility	Color Pattern of Light Flashes
Airport	White, Green
Military Airport	White, White, Green
Heliport	Green, Yellow, White
Water Airport	White, Yellow

Normally beacons operate from sunset to sunrise. However, at airports in controlled airspace, the beacons are also operated during instrument meteorological conditions. Specifically, when visibility is less than three (3) miles or the ceiling is less than 1,000 feet.

Lighting Control

Activating airport lights, as well as controlling the intensity, is an important aspect to airport lighting. At airports with an air traffic control tower, airport lights are controlled by the air traffic control tower, although pilots may make requests. At an uncontrolled airport, and when the air traffic control tower is closed, airport lights are controlled by pilots. Pilots in the proximity of the airport can control airport lighting by tuning in a specific frequency and keying the microphone a certain number of times. Most airports

utilize the local Common Traffic Advisory Frequency (CTAF), though other frequencies may be used.

Keying the mike seven (7) times within five (5) seconds will turn all airport lights on at their highest intensity. Keying the mike five (5) times within five (5) seconds will turn the lights on or lower them to medium intensity. Keying the mike three (3) times within five (5) seconds will turn the lights on or lower them to their lowest intensity. At lower intensity controls, the REILs may also turn off.

All airport lighting features for a particular airport are always controlled via the same frequency and illuminated for a period of 15 minutes from the most recent activation. There is no functionality to turn off the airport lights during this period. Finally, it is recommended to always activate airport lights at their highest setting and make subsequent adjustments as needed.

Find Out More

To find out more about airport lights, check out Chapter 2 of the FAA's *Aeronautical Information Manual (AIM), Order JO 6850.2B,* or *Advisory Circular 150/5340-30H*. ❑

Meet Meredith Alt

Aviation Education Program Manager

WisDOT Bureau of Aeronautics

Meredith Alt

In June 2017, Meredith Alt joined the Wisconsin Department of Transportation Bureau of Aeronautics (BOA) as the Aviation Education Program Manager. In her role, Meredith manages the Aviation Career Education (ACE) internship program, in which disadvantaged youth in Milwaukee participate in educational and leadership opportunities at General Mitchell International Airport. She also promotes youth aviation/aerospace and serves as a liaison to educators and the public about innovative aviation programs in the state.

Meredith holds a Master's degree in Educational Policy Studies and a Bachelor's degree in History from the University of Wisconsin-Madison. Prior to joining WisDOT, she started her career as a K-6 teacher and taught English as a Second Language for several years in Mexico. She spent most of the past decade managing educational programs and projects at a multi-state consortium housed at the University of Wisconsin-Madison. Meredith is excited to work with educators and aviation enthusiasts to get more young people involved in aviation!

Outside of work, Meredith enjoys travel, spending time with family, and being outdoors as much as possible.

For questions related to aviation education, please email Meredith Alt at **meredithl.alt@dot.wi.gov** or call 608-266-8166. ❑

International Aviation Art Contest

by Meredith Alt

WisDOT Bureau of Aeronautics

Calling all artists between the ages of 6 and 17, the International Aviation Art Contest is now underway! The Bureau of Aeronautics at the Wisconsin Department of Transportation, in partnership with the National Association of State Aviation Officials (NASAO), invites students to create a work of art that celebrates the adventures and excitement of the world of flight.

This year's theme focuses on "Flight Into The Future." The only limit to the future of flight is the creativity of builders, dreamers and pilots of today. Artists are encouraged to use their favorite art supplies and show their vision of what new innovations and ideas will shape aviation in the future. Entries will be judged on the creative use of the theme. The top three entries for each age group will advance to the national competition and receive the following awards:

1st Place: $100 art supply gift certificate or an airplane ride for the winner and a guest.
2nd Place: $75 art supply gift certificate.
3rd Place: $50 art supply gift certificate.

The top three Wisconsin entries and an honorable mention for each age group will also have their artwork displayed in the State Capitol Rotunda in Madison.

Wisconsin participants should send artwork and the authenticity form included in the 2018 Aviation Art Contest brochure to:

Rachel Miller - Ages 6-9

Danielle Strzelecki - Ages 14-17

Lennon King - Ages 10-13

Meredith Alt
WisDOT Bureau of Aeronautics
4802 Sheboygan Avenue Room 701
Madison WI 53707-7914

All artwork for the state competition must be postmarked by **Friday, January 19, 2018.**

To download the official brochure, see the WisDOT website at **wisconsindot.gov/artcontest**.

For questions, contact Meredith Alt, WisDOT Aviation Education Program Manager, at **meredithl.alt@dot.wi.gov** or (608) 266-8166. ❑

IFR/VFR Seminars To Be Held Saturday, October 14, 2017

The Wisconsin Department of Transportation Bureau of Aeronautics is happy to announce that Volk Field will be hosting a Fly-In Pancake Breakfast and Instrument Flight Rules/Visual Flight Rules (IFR/VFR) seminars on Saturday, October 14th, from 8:00 a.m. to 4:00 p.m.

The event schedule is as follows:

- 8:00 a.m.– Breakfast and facility tours
- 10:00 a.m. – Seminars begin
- Lunch
- 3:00 p.m. – Departures begin

The event is free and open to the public, but there will be a small fee for breakfast and lunch.

Participants are welcome to fly or drive to the event. **All participants must register by September 25th** on the WisDOT website at **http://wisconsindot.gov/Pages/doing-bus/aeronautics/trng-evnts/ifrvfr-sem.aspx.**

This is a rare opportunity for pilots and passengers participating in the new Fly Wisconsin Passport Program to obtain the Volk Field stamp for their passport and satisfy their safety seminar requirement.

For more information contact Levi Eastlick, WisDOT Pilot Education Coordinator, at (608) 267-5018 or **levi.eastlick@dot.wi.gov.** ❑

MINNESOTA AERONAUTICS BULLETIN
www.dot.state.mn.us/aero
DEPARTMENT OF TRANSPORTATION
The State of Minnesota provides this Technical Bulletin in the interest of Aviation Safety and to Promote Aeronautical Progress in the State and Nation.
Cassandra Isackson, Director **Dan McDowell, Editor**
Minnesota DOT Office of Aeronautics
222 East Plato Boulevard • St. Paul, MN 55107-1618
651-234-7200 or (toll free) 1-800-657-3922

What do airport managers do?

by Cassandra Isackson
Director, Minnesota DOT Office of Aeronautics


Cassandra Isackson

Minnesotans are fortunate to have 135 wonderful public-use airports and 15 seaplane bases throughout the state. We are equally fortunate to have many truly awesome airport managers who work very hard all year long to keep our publicly owned and operated airports safe, serviceable, and user-friendly (Minnesota Nice). But not every airport is the same and neither are the airport managers and the jobs they have to do.

In a broad-based definition, airport managers supervise airport terminal activities. In other words they are the main point of contact for city administrators, or airline officials, air cargo companies, pilots, aircraft owners, and the general public. They are also responsible for maintenance and day-to-day operation of the airport, including its safety infrastructure. In addition, airport managers are responsible for helping to assure that federal, state, and local regulations are followed, and that the airport is maintained to proper safety standards for aviators and non-aviators alike.

Many airport managers are professionals, like those who manage the larger airline-served airports, or are hired by the city to operate and maintain the airport. Other airport managers also own the fixed base operation and function as part-time managers, a local pilot who is a part-time airport manager, or the city clerk, or the public works engineer.

Airport managers are responsible for keeping the operation of the airport within budget. That includes the costs for mowing, snow removal, garbage disposal, and airfield maintenance and upgrades, including general esthetics. They manage airport employees and are the liaison to the city about the needs of the airport, improvements, and programs. They can also be responsible for coordinating multiple crews and agencies if there is a crash or emergency on the field.

There are, no doubt, a number of other items that could be listed in the job description of an airport manager. Many people rely on airport managers to keep their community airport running well and operating safely. After all, the community's airport IS an economic engine, not only for the community, but also for the surrounding region.

Did you know there is a way for pilots, aviation enthusiasts, and others to get involved in their local airport and show support for their airport manager? It is called the Adopt-An-Airport program. Individuals, groups, and organizations can volunteer to actively support their local airport by assisting in the maintenance and beautification of the airport facilities, and much more.

Adopt-An-Airport promotes airports and gives visible recognition to volunteers, while also creating increased awareness among local citizens about the positive economic impacts and benefits the airport brings to their city, benefiting every citizen and not just aviators.

Any public-use airport in Minnesota is eligible to participate in the Adopt-An-Airport program. For additional information, go to **http://www.dot.state.mn.us/aero/aviationeducation/aviationadoptanairport/adoptanairport.html**, or contact Darlene Dahlseide at 651-234-7248, or via email at: **darlene.dahlseide@state.mn.us**, for additional information about the Adopt an Airport program and program applications. ❑

When Life Imitates Art, Sort Of

by Dan McDowell

It is almost a standard part of nearly every comedy program on TV these days to have a character experience a moment of 'life imitating art.' And if done well, it can be pulled off as a very funny situation. But when it happens in real life, it often isn't funny at all, at least not at the moment when it occurs. I'll explain this at the end of the article.

One of those life things that can sneak up on you and bite you in the empennage during our frosty season from October

to March, is "black ice." It can form when the air temperature is at, or below freezing, but is above the pavement temperature. The air can no longer hold its moisture and that moisture quickly condenses on the pavement.

Black ice generally forms with a relatively smooth, flat surface that visually presents the appearance of nothing more than a shallow puddle of water or a shiny, wet area or a black spot on the road, taxiway or runway. You should also know that black ice is not black at all. In fact, it is actually transparent. Thus, it can be exceedingly difficult, at best, to see black ice in daylight hours, and nearly impossible to see especially at night on roadways, taxiways, runways, sidewalks, and even porch decks. Keep in mind also that it does not have to be snowing or raining for black ice to form.

It is very important for aviators (and drivers) to maintain a heightened sense of awareness of winter's rapidly changing weather patterns and their impact on local surface conditions. It is also important to maintain awareness that black ice can be present on any paved surfaces. Thus, when you are preparing for flight, you should maintain a heightened level of awareness as you drive to and from the airport, and as you taxi for takeoff and after landing.

When conditions are conducive to black ice formation, remember that even though you may not have experienced black ice on your well-traveled roadways, the possibility still exists that black ice may be on your airport roadways, taxiways and runways. Staying alert and aware of current and changing weather conditions is critically important to your safety and the safety of your passengers.

Last November, I experienced black ice in an 'up close and personal' manner. I stepped on what I thought was simply a wet spot on my front porch deck, after checking four other wet spots that were in fact wet spots! The fifth one was black ice. I slipped and in the end did significant damage to my right knee. Earlier that day at the office, I had started drafting an article for the Tech Bulletin about the dangers of black ice. Irony? Karma? Bad Luck? Whatever the case, I was off work nearly 6 months because of the injury. So the point is, black ice, or any ice, when stepped on unexpectedly, can cause you to fall and possibly sustain serious injuries.

We are well into the frosty season and I urge you to be careful out there when walking, driving, or flying. It only takes a few seconds to have your life changed in a huge way. Oh, by the way, the answer is 'yes,' I do laugh at the irony of the original article I wrote last November 23rd, and the end result. Now more than ever, I am practicing what I am preaching! ❑

More Than 637,000 New Opportunities!

by Dan McDowell

***Updated* Forecasts**

On July airline maintenance technicians24th, 2017, the Boeing Aircraft Company released their updated forecast for 2017-2036, predicting the needs for the aviation industry, more specifically, the commercial airline industry. According to Boeing, "The 2017 outlook shows a slight increase of 3.2 percent for pilots over the 2016 outlook, and a slight decrease in the need for airline maintenance technicians (4.6 percent), primarily driven by the reduction in maintenance hours required on the 737 MAX.

While Boeing projects a world-wide demand for more than 1.2 million pilots and technicians over the next 20 years, the reports states the world's commercial aviation industry will require approximately:
637,000 new commercial airline pilots
648,000 new commercial airline maintenance technicians.
839,000 new cabin crewmembers.

According to Boeing's Randy Tinseth, vice president of marketing for Boeing Commercial Airplanes, he predicts that "the demand for commercial airliners will continue to grow at approximately 4.7% per year during the next 20 years, particularly in Asia, with a need for 41,030 planes (airliners) worldwide with an estimated value in U.S. dollars of $6.1 trillion."

Boeing bases its numbers in part on trends in passenger growth which show that by about 2020, if not before, 4 billion passengers will have flown on the world's airlines. To put that in perspective, it took from 1946 through 1987 (41 years) for airlines to reach the 1 billion passenger mark. The 2 billion mark was reached between 1988-2006 (18 years). The 3 billion passenger mark was reached from 2007 to 2013 in a mere 6 years.

The Boeing report goes on to say "… low-cost carriers and new markets would spur demand for 29,530 single-aisle planes, a projection 5% higher than last year, worth a combined $3.2 trillion. The projection for 9,130 wide-body passenger planes, such as the 787 and 777X worth a combined $2.5 trillion, anticipates a "larger wave" of potential replacement aircraft early in the next decade. Regional jets and freighters round out the demand."

Bear in mind that Boeing's figures are their best

prognostications given the data currently available, collected and studied. The exact figures of course cannot truly be known at this time. But given the trends analysis, and a myriad of other factors Boeing considers in the report, the numbers foretell of a bright future for aviation in general. The complete study and additional information can be found at: http://www.boeing.com/commercial/market

So what does this mean for GA?

Everything! General Aviation is the primary training ground for the vast majority of commercial airline pilots. Even most new military pilots (USAF) begin their basic flight training in a GA aircraft (DA-20-C single-engine prop) no matter what their ultimate career aspirations may be. So it is easy to see the coming of the need projected by Boeing, (and several other sources as well), and clearly indicates a significant opportunity for the growth and expansion of GA. It also indicates that a window of opportunity is open right now, for huge numbers of new people to be introduced to GA. And they will need good mentors from the outset and along their paths to flying for the airlines, military, or corporate.

Look at it this way for a moment: given just the Boeing data mentioned earlier in this article, there are at the least ***637,000*** opportunities for young men and women to become new pilots and technicians. Now think of the benefits that potential GA activity will bring to many airports across the state and nation. Imagine how GA airports and flight schools at FBOs, for instance, could grow and prosper. Imagine the numbers of new and technologically advance GA aircraft that would likely be purchased by flight schools and used to train students.

There are 637,000-plus opportunities for experienced pilots, technicians, or anyone in aviation to talk to young people about the opportunities before them in GA and beyond. You can show them what you do in and for aviation. Excite them about the many possibilities and opportunities that are coming available. Help them make a choice, and then be a mentor to them.

Step up now and share the joy you have found in aviation, with the next generation of potential aviators, engineers, technicians, mechanics and other professionals. Motivate them to seek out careers in the aviation industry, and help them to imagine and visualize a great and exciting future. It is very important to maintain a dialog with them about their new found possibilities. Then point them to resources that will be useful and helpful to them. The future of GA is in your hands.

Now think a little further about GA. Imagine the additional opportunities that will open up for GA aircraft manufacturers as more aircraft are needed for flight schools and new owners. It follows that there will be an increased need for GA flight instructors, technicians and mechanics, line service and customer service personnel, engineers, and designers. Next, imagine the wonderful positive benefits all the above could bring not only to those in aviation, but also to your airport, and to your community as well.

Keep in mind that the aviation system provides benefits to all citizens in the form of timely, reliable and safe delivery of goods and services. This includes mail, perishables, high-value items, and individual transportation, specialized doctors and medicines, and law enforcement. GA also fosters and aids in the economic growth and wellbeing of the community.

Now I urge you to take full advantage of the opportunities to introduce new people to General Aviation. And remember to share the good news with your city leaders. Remind them of the current and potential value of your local airport to the city. As stated previously, every citizen in your community benefits from aviation at your local airport.

So plan to get together this winter with fellow aviators. Use that time preparing for spring by planning ways to help GA grow and positively impact the lives of many local citizens. You have 637,000 reasons to make a positive difference, and it only takes one good idea for you to help make new dreams take flight. ❑

WANTED: "Your Best Minnesota Aviation Photos"

ST. PAUL, MINN. – The MnDOT Office of Aeronautics invites you to submit your best photos, which highlight aviation in Minnesota, for its annual photo contest. Winners are selected by open voting from the selected photos starting in November and may be featured on publications, including the annual Minnesota Airport Directory and Travel Guide, the MnDOT Office of Aeronautics booth at various events, and its website.

By submitting your photo(s), you agree to allow the MnDOT Office of Aeronautics to use your photos without additional compensation, and your submission indicates you are the photographer and the photo was taken in Minnesota. Photo credit will be provided when possible.

Preferred minimum size is 6 megapixels for portrait and 12 megapixels for landscape. Please submit your photos to **rachel.obermoller@state.mn.us** by October 31, 2017. ❑

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Midwest Flyer Magazine
Dave Weiman
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641.426.2012

Clarification On Minnesota Fuel Tax Sought & Clarified

by Jim Hanson


Jim Hanson

Recently, an airport manager from Minnesota who is responsible for the fuel sales at his airport, was confused over how he was expected to report sales tax on auto fuel sold for aircraft under changes enacted during the last legislative session, so he asked for clarification. It turned out that there was bad intention, bad forms, and bad direction to account for fuel taxes, but today there is understanding between the airport retailer and Minnesota Department of Revenue. Here's what was learned:

- Minnesota charges 28.5 cents tax on each gallon of auto fuel sold.
- In the past, purchasers could claim a 23.5 cent per gallon refund by applying for it, as the aviation tax for fuel dispensed on an airport is only 5 cents.
- Airport retailers could conceivably claim the same 23.5 cents per gallon.
- Starting July 1, 2017, airport retailers of auto fuel can opt to have their fuel suppliers NOT charge the 23.5 cent fuel tax – only the 5 cents. This is a big savings in paperwork AND fuel tax. (Note: The airport manager is having his wholesaler research how best to submit the form.)
- The confusion is because the rebate form provided reads "distributor" – not "retailer." It also references "jet fuel" instead of "aviation auto fuel." There is no updated form as of yet.
- Retail purchasers of auto fuel, whether from an on-airport vendor or the local gas station, may apply for the 23.5 cent rebate using the form for each calendar year when supported by receipts showing the total tax paid. The rebate request must be submitted before April 30 of the following year.
- Presumably, airport retailers will not be charged the 23.5 cent tax by their distributors, so fuel purchased from the airport vendors will not be eligible for rebates. Thus, the requirement to document how much tax was or was not paid. If the retailer did not have to pre-pay the tax, the price of auto fuel at airports should come down–making it more competitive with gas stations.
- The Minnesota Department of Revenue was not aware that aviation self-serve pumps do not break out tax paid. Most airport fuel retailers won't break out tax paid, either.

Operational Implications

1. If an airport fuel retailer dispenses "aviation auto fuel," they should ask their aviation fuel distributor for an exemption from the 23.5 cents per gallon tax for any auto fuel purchased for resale after July 1, 2017, charging ONLY the 5 cents per gallon going to help fund the Minnesota Department of Transportation Office of Aeronautics. They should adjust their prices accordingly.
2. This may make airport retailers more competitive with auto fuel service stations – cutting the price differential. Those that purchase auto fuel from non-airport locations will likely NOT file for the refund.
3. Recordkeeping. If the airport retailer is exempt from the tax by their distributor, they do not need to capture pilot names, aircraft registration numbers, tax paid, etc. If the airport retailer pays the tax, they (and their customers) will have to file for the rebate, using the record-keeping requirements. Unless the aircraft owner is burning a lot of auto fuel, it may not be worth the effort in record-keeping and filing for the rebate. The owner would have to use 425 gallons of auto fuel per year to save $100.
4. When asked why this issue came up, the airport retailer was told that the Minnesota Department of Revenue, "Does not want someone fueling their car from an airport tax-exempt pump." The airport retailer explained that with the special care and handling of aviation fuels, aviation auto fuel costs MORE than what a pilot would pay at the pump at the local gas station. There is no economic reason to buy aviation auto fuel for one's car at an airport.
5. If, for some reason (convenience) the airport retailer wants to fill the airport weed-eater from the aviation auto pump, they would be subject to the tax and the record-keeping. It's not worth the hassle for the minute amount of money involved. Many airports have a "sump bucket" to collect fuel drained from airplanes during preflight, rather than the old practice of dumping it on the ground. Since that fuel has already been pumped into an airplane, the airport retailer can use that fuel in their weed-eater. Weed-eaters don't care if the little fuel they burn contains a mixture of 100LL and auto gas.
6. The Minnesota Department of Revenue argues that "fuel must be dispensed directly into an airplane," therefore prohibiting fuel from going into cans, barrels, or portable tanks for use on seaplanes, ski planes, ag planes, or farm strips. The Minnesota Department of Revenue has no answer for

this, other than an unofficial, "If the fuel is dispensed from an airport fuel farm, by a pilot, and intended for aviation use, that seems to qualify as 'into an airplane.'"

In summary, the airport retailer mentioned here suggests that it would be so much better for fuel wholesalers, retailers, and pilots if the tax were simply left alone, and the entire tax was dedicated to the Minnesota Department of Transportation Office of Aeronautics to help fund state airport projects, rather than being diverted into the highway fund. The increased regulation and reporting requirements will likely result in FEWER airports choosing to offer auto fuel.

For additional information on aviation fuel taxation, contact the Petroleum Tax Unit at the Minnesota Department of Revenue at 651-296-0889.

EDITOR'S NOTE: Pilots, aircraft owners and airport managers in other states should research how aviation fuel is taxed in their respective state, and get clarification where necessary. ❑

Flight Line Gift Store Now Open!

BLAINE, MINN. – Flight Line Enterprise has started the first phase if its company by opening an aviation theme retail store. Like its original site development plan, Flight Line Enterprise is now selling books, models, prints, toys, pilot supplies, collectables, clothing and more! The store is located in "Nate's Plaza," three blocks west of Highway 65 at 1033 109th Avenue NE, Blaine, MN 55434. For current hours, call 763-784-6400 or email Info@FlightLineLTD.com, or visit its website: www.flightlineltd.com. ❑

WATA Difference

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Private Airport Owner Hosts Fly-In Without Fear of Liability

DE PERE, WIS. – Jay Baeten, owner of Antique Aerodrome in De Pere, Wisconsin (9WS2), was able to host a fly-in at his private airstrip, August 26, 2017, without fear of liability, thanks to an amendment to Wisconsin's Recreational Use Statute. Baeten was among those pilots who successfully lobbied to include non-commercial aviation under Wisconsin's Recreational Use Statute in 2014 (Senate Bill 321, RUS 895.52). Previous to this amendment, landowners were protected from liability for such other public uses as snowmobiling, all-terrain vehicle operations, hunting and cross-country skiing. The amendment now includes "aviation" as a recognized public use. Commercial aviation is not included in the amendment.

With the passage of this legislation, Wisconsin joined dozens of other states, which had already amended their state statutes to include aviation.

Other private airport owners who lobbied with Baeten were Chuck Aldrian of Birchwood, Wisconsin, and Don Kiel of Whitelaw, Wisconsin.

Senator Joe Leibham of Wisconsin's 9th Senate District, and Representative Paul Tittl of Wisconsin's 25th Assembly District,

Jay Baeten, owner of Antique Aerodrome in De Pere, Wisconsin (9WS2), with his Cessna 170. *Dave Weiman Photo*

sponsored the bills, which Governor Scott Walker signed into law. The amendment, which came about as a result of an article written by Jim Hanson of Albert Lea, Minnesota, and published in ***Midwest Flyer Magazine***, was supported by the Recreational Aviation Foundation, Aircraft Owners & Pilots Association, and Experimental Aircraft Association.

For additional information on how to introduce an amendment to the Recreational Use Statute in your state to include non-commercial aviation, contact the Recreational Aviation Foundation at 406-362-4743 (www.theraf.org). ❑

Oklahoma's Lake Eufaula – Fly-in/Camp-out

by Yasmina Platt

Yasmina Platt

In previous articles, I have been detailing sample air trails or air tours, but if you prefer a destination instead, Oklahoma's Lake Eufaula, formerly known as Fountainhead State Park, may be a good option for you. Situated between Fort Smith, Arkansas to the east, Tulsa, Oklahoma to the north, Oklahoma City, Oklahoma to the west, and Dallas, Texas to the southwest, Lake Eufaula is a reservoir on the Canadian River, 27 miles upstream from its confluence with the Arkansas River. It is the largest-capacity lake in the state of Oklahoma with a volume of 2,099,000 acre feet, a surface area of 102,000 acres, and 600 miles of shoreline.

Airports

While charted, Carlton Landing Field (91F), owned by Oklahoma Tourism and Recreation, is indefinitely closed according to the Chart Supplement (formerly the Airport Facility Directory or A/FD).

Eufaula Municipal Airport (F08) and Fountainhead Lodge Airpark (0F7) may be unattended, but they both have 3,000 foot runways. I would recommend you call them before landing for a condition update. And keep in mind that neither airport has fuel. The Fountainhead Creek Golf Course is next to 0F7 and the Lake Eufaula Marina is not too far either. They offer boat rentals, have a fish store, and sell pizza, among other things.

If those runways are not long enough, McAlester Regional Airport (KMLC) or Henryetta Municipal Airport (F10) are not too far, but you would need a rental car to get to the lake from either airport.

Camping or Glamping

RV and tent camping can be found all around the park, some with beautiful lake views.

Don't want to "rough it" camping? How about glamping? There's no tent to pitch, no sleeping bag to unroll, no air mattress to pump, and no fire to build to cook. And what if I tell you it could be in a yurt? Yep! Fun! Lake Eufaula State Park has a campground (or glampground) that rents three yurts for overnight guests looking to camp without the hassle of leaky tents, bulky camping gear and dirty conditions. Every yurt comes equipped with heating/air conditioning, all bedding, a microwave, mini fridge, electricity and television. There is no running water inside the yurts, but the restrooms are located close by.

Things To Do and See

Lake Eufaula, the largest lake in Oklahoma, offers a wide variety of activities to make your camping trip enjoyable. Boat rentals, marinas, fishing, boat ramps, nature center, ATV riding trails, hunting, hiking and biking are just a few of Eufaula's amenities and activities.

Lake Eufaula State Park has many outdoor activities for you to enjoy during your flying excursion. You can hike one (or more) of the many hiking trails, cast a line in the lake or Kid's Fish Out Pond, visit the Nature Center, go swimming in the lake or enjoy the sandy beach area, rent a boat at the local marina, go horseback riding, or just sit back and relax and enjoy the shores of the lake.

For more information or to book a camping site, visit the OK State Park and the Travel OK websites.

Life is short! Fly safe and fly often! ❑

National Science Foundation Selects Northland To Lead Large Drone Education Initiative Project

by Jonathan Beck


Jonathan Beck

THIEF RIVER FALLS, MINN. – The National Science Foundation Advanced Technological Education Program has awarded Northland its second NSF ATE Project (DUE 1700615), "Unmanned Aircraft Systems and Geospatial Information Technology Integration into Technician Education." This project will advance Unmanned Aircraft Systems (UAS) and Geospatial Education for career pathways across the state of Minnesota and beyond. UAS, often referred to as "drones," are being adopted as another tool for many industries. Geospatial Technology is key to turning digital data into products like Google Earth.

Multiple geospatial layers, satellite imagery, street maps and other information create powerful products. Northland has conducted many applied research projects collecting layers of data with drones. This data is being integrated in classroom instruction. Students experience practical applications for drone and geospatial technology.

St. Cloud State University (SCSU) is a principal partner for the new NSF ATE project. SCSU has a robust Geography Department and a Spatial Analysis Research Lab. One program emphasis is Geographic Information Systems (GIS). SCSU is also well known for its land survey and mapping program. Both programs use Geospatial Technology.

SCSU will provide tremendous resources to advance applied applications of drone technology. The partnership with two-year colleges will enhance technician education in these advanced technologies.

Northland and SCSU are building articulation agreements between two-year technical and four-year degree programs. Students graduating from technical programs in advanced technology are in high demand. This project will open the doors to expand options for continuing education. Stackable certificates are also a part of the project. Certificates will focus on drone pilot requirements and education on drones and geospatial technology. This project will also continue expanding the opportunities for DroneTECH Educator Workshops. The DroneTECH workshops allow educators to access resources and professional development. Educators learn about UAS and Geospatial Technology and the impact on their disciplines.

Information can be found on the Northland Aerospace website: **www.northlandaerospace.com/dronetech**

There will be an even broader impact as more industries integrate these technologies. Many businesses and organizations are now seeking qualified employees who understand drones and Geospatial technology. This project will leverage industry collaboration to assist in creating internships. Northland has already broken ground on new applications, engaged industry, and formed partnerships. This has all led to developing technical education to support emerging industry needs.

This innovative model is cultivating development of classroom projects with real-world impact. Industries partnering with Northland have discovered new applications for drone technology firsthand. Content from these projects is being integrated into the classroom. Students are able to show their skills through classroom projects and presentations. Demonstrating successful outcomes attracts greater interest and investment, continuing the cycle of growth.

EDITOR'S NOTE: Jonathan Beck is the UAS Instructor/Program Manager at Northland Community and Technical College, Thief River Falls, Minnesota. This material is based in part upon work supported by the National Science Foundation (DUE 1501629). Any opinions, findings, conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation. ❑

New Unmanned Aircraft Systems Research Facility At UND Aerospace

GRAND FORKS, N.D. – The University of North Dakota's (UND) Robin Hall opened last year as the tallest building in Grand Forks and the headquarters for the unmanned aircraft systems (UAS) programs at UND's nationally acclaimed John D. Odegard School of Aerospace Sciences. After more than a year of construction, the first students arrived for the 2016-17 academic year.

The $22 million, 72,000-square-foot aerospace research facility was designed by ICON Architectural Group. Olaf Anderson Construction served as the general contractor. The building's sleek, light-filled design features curtainwall and storefront systems from Tubelite Inc. of Walker, Michigan, to meet the structure's modern aesthetic, sustainability goals and performance requirements.

Inside Robin Hall, four floors house a large auditorium, student study space, administration offices, classrooms, collaborative learning spaces and hangar space for flight testing. The building's basement also includes open research space with laboratories and simulators. A skywalk directly connects the new facility to UND Aerospace's Ina Mae Rude and Ryan Hall.

UND's School of Aerospace Sciences has seen tremendous growth. The university was the first to offer a bachelor's degree in unmanned aircraft systems, which has been a major focus since 2008.

Robin Hall at the University of North Dakota, Grand Forks, N.D.

Private donations and $1.5 million in matches from the North Dakota State Board of Higher Education Challenge Fund largely financed Robin Hall. The building's name honors the largest contributors to the project, Mary E. Bazar and Si Robin. ❑

Duluth Area Students Receive 2017 Apollo Gilruth Continuum Award For Academic Excellence

DULUTH, MINN. – The top Gilruth Continuum aviation science students – Peyton Nelson, Claire Atella, and Grace Heine – have received the Apollo-Gilruth Continuum Award for academic excellence from the Duluth Aviation Institute, Sky Harbor Airport. The Duluth Aviation Institute supported the 6th grade science teachers with curriculum and classroom kits for the two-month aviation science unit this past school season. The recipients excelled in all curriculum aero-activities, extra credit projects, and in the post-test. The top 15% of students who excelled throughout the program were rewarded with the Kundel First Flight Event at Lake Superior College Center for Advance Aviation on August 26th. On September 9th, the students received a Young Eagles flight at Superior's Richard I. Bong Airport.

In collaboration with the school districts, the Duluth Aviation Institute has been bringing aviation into the classrooms since 2010 and is currently presenting the Gilruth Continuum program at Ordean East, Lincoln Park, Proctor Middle Schools and Marshall School. During the 2016-17 school season, Nate LaFond, aviation educator for the Institute, and classroom science teachers Sandy Pearson, Peter Froehlingsdorf, Tanya Jackson, Josh Gookins, William Benson, Deb Showalter, and Dave Johnson presented the Gilruth Continuum aviation science unit to 850 sixth grade students.

Creating partnerships for success, the Duluth Aviation Institute called upon EAA Duluth-Superior Chapter 272, Lake Superior College Center for Advance Aviation, and Fly Duluth to assist with the EAA Young Eagle flights.

The Duluth Aviation Institute's vision is community inspired and enriched by the art and science of aviation. Robert Gilruth, Father of Human Space Flight and child citizen of Duluth, was inspired in his youth to become an aeronautical engineer resulting in great contributions to the world. As the first director of the Johnson Space Center, Gilruth led the national effort to achieve the objective of "landing man on the moon and bringing them safely back to earth." (www.duluthaviationinstitute.org) ❑

ForeFlight Introduces New Dual-Band ADS-B Receiver

ForeFlight Scout

ForeFlight booth at EAA AirVenture Oshkosh 2017.
Dave Weiman Photo

HOUSTON, TEXAS – ForeFlight, creator of the most innovative and widely used flight planning and electronic flight bag app for the Apple iPad and iPhone, is introducing "Scout," a portable, dual-band ADS-B receiver that delivers inflight weather and traffic information to the ForeFlight Mobile app in the smallest, most elegant form-factor on the market. Retailing at $199 USD, Scout is the industry's most affordable off-the-shelf ADS-B In solution.

"We are excited to bring Scout to market in collaboration with uAvionix," said Tyson Weihs, ForeFlight co-founder and CEO. "We want every pilot flying with the benefits of ADS-B In. The combination of an ADS-B In solution with ForeFlight makes flying safer and we believe has led to a meaningful reduction in weather-related incidents and accidents. We are delighted to now offer – for those pilots and operators on a limited budget – a low-cost option that will increase the number of pilots who can fly with this essential safety-enhancing capability. Inflight weather and traffic delivers better situational awareness and leads to better decision making."

ForeFlight teamed up with Palo Alto-based uAvionix to design and manufacture Scout. Scout has an ultra-compact form factor at 84mm x 21mm x 8mm (3.4in x 0.8in x 0.3in) and weighs-in at 17 grams. The dual ADS-B antennas are optimized for 978 MHz and 1090 MHz frequencies and are integrated into the casing to create Scout's compact design. The traffic awareness capability functions worldwide.

Scout is easy to setup and use - there's no hardware to assemble, no software to download, nothing to configure. Simply position on any window surface using Scout's flexible ball-joint and suction cup mounting system, plug into a power source, and go fly. Scout can be powered using any 5 volt Micro-USB power source, including existing USB chargers installed in aircraft or rechargeable USB batteries.

Customers can connect their iPad or iPhone directly to Scout's integrated Wi-Fi network and receive inflight subscription-free ADS-B weather and traffic information displayed exclusively on the ForeFlight Mobile app. Scout supports up to four devices as well as Cockpit Sharing, a feature that enables users to easily share routes between all devices on Scout's network. It's perfect for a copilot or flight instructor to follow-along and monitor weather and traffic.

Scout supports the full range of FIS-B weather and data, including animated regional and CONUS NEXRAD, METARs, TAFs, AIR/SIGMETs, PIREPs, winds and temps aloft, TFRs, NOTAMs, and SUA information. Scout can also receive air-to-air traffic information from ADS-B Out equipped aircraft and re-broadcast traffic information (ADS-R and TIS-B) from FAA ground towers. Customers should keep in mind that if their aircraft is not equipped with ADS-B Out, then they will have a limited view of traffic on ForeFlight.

All ForeFlight subscription plans support connectivity with Scout. Customers can purchase Scout online at Amazon (www.flywithscout.com). ❑

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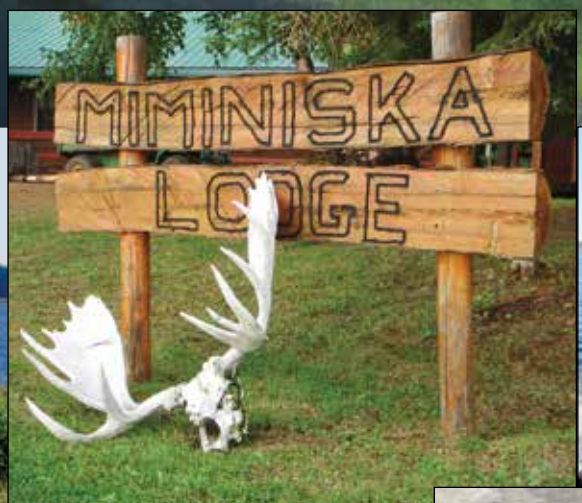

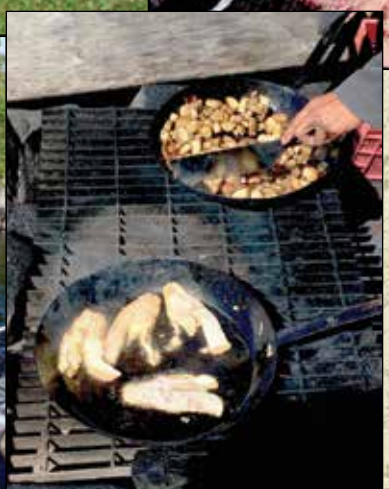

Calendar

Include the **DATE, TIMES, LOCATION *(CITY, STATE & AIRPORT NAME & I.D.),*** and **CONTACT PERSON'S TELEPHONE NUMBER**, as well as that person's address & email address for reference. First 15 words **FREE.** $.75 for each additional word.

Go to "Calendar" at www.MidwestFlyer.com and post your aviation event.

You can also email: info@midwestflyer.com – Or – Mail To: Midwest Flyer Magazine, 6031 Lawry Court, Oregon, WI 53575

NOTAM: Pilots, be sure to call events in advance to confirm dates and for traffic advisories and NOTAMs.

Also, use only current aeronautical charts, etc., for navigation and not calendar listing information.

Midwest Flyer Magazine is not responsible for the accuracy of, or reliance on, any information published.

* Indicates any new or updated calendar listings since the previous issue.

OCTOBER 2017

6-7 Groton, Conn. - **AOPA Fly-In at the Groton-New London Airport** www.aopa.org/community/events/aopa-fly-ins/2017-aopa-fly-ins

6-8 Nashua (KASH), N.H. - **Bonanza & Baron Pilot Training** to register call 970-206-0182 or 817-988-0174. www.bonanzapt.com

7* Crivitz (3D1), Wis. - MACC Fund Fly-In 10am-8pm. All proceeds donated to MACC Fund. Walking Distance to Tarmac. LIVE Music.

7-8 Eagleville (TN14), Tenn. - Just Plane Fun for Slow Flyers to hang out and enjoy the other similar aircraft. (Not for faster aircraft like RVs or warbirds). Designed for aircraft like Luscombe, Cessna 140, Aeronca, Cubs, Homebuilts, Light Sport, Hatz, Rans, Ultralight, etc. Welcome to come on Friday, Oct. 6 to camp out. 3600 Ft Grass Strip (1/19), Com 123.5, < 75 mph pattern speed. All patterns on west side of strip. Fly in or Drive in, Camping, Campfire Sat night (No fuel or showers on the field. Fuel at SYI 12 mi south). Will cook Breakfast and Dinner. The chapter email is chapt458@gmail.com. The chapter website is www.458.eaachapter.org.

8 Poplar Grove (C77), Ill. - Pancake Breakfast.

8-9* Chamblee, Ga. - Atlanta Warbird Weekend featuring at least 20 original Tuskegee Airmen at the Dekalb-Peachtree Airport. www.atlantawarbirdweekend.com

11-12 Las Vegas, Nev. - NBAA's Business Aviation Convention and Exhibition. info@nbaa.org

14 Milwaukee (KMWC), Wis. - Join us for pancakes, sausage, bacon, coffee and camaraderie at the monthly fly-in breakfast at Milwaukee Timmerman Airport (KMWC), from 8:00-11:00am. Breakfast is free for the PIC with a top-off or 30 gallon fuel purchase. We'll enjoy breakfast in the historic former "Skyroom" restaurant area overlooking the ramp. See you there!

14 South St Paul (KSGS), Minn. - Annual Planes and Paws at the CAF Hangar, Fleming Field Airport 10am to 2pm.

20-22 Concord (KCCR), Calif. - **Bonanza & Baron Pilot Training** to register call 970-206-0182 or 817-988-0174. www.bonanzapt.com

27-28 Tampa, Fla. - **AOPA Fly-In at the Peter O. Knight Airport** www.aopa.org/community/events/aopa-fly-ins/2017-aopa-fly-ins

29* Juneau (KUNU), Wis. - **3rd Annual PUMPKIN DROP.** Drop a pumpkin out of a plane and try to hit the target. Join us for the fun at Dodge County Airport, Juneau, Wisconsin, for this awesome event. Food and beverages will be available. $30 for two tries! We will have old pumpkins on hand, but if you want to bring your own, that is great! www.wisconsinaviation.com/contact/news

NOVEMBER 2017

3-5 Norfolk (KORF), Va. - **Bonanza & Baron Pilot Training** to register call 970-206-0182 or 817-988-0174. www.bonanzapt.com

4 Atchison (K59), Kan. - Pumpkin drop, bonfire, and pumpkin pie competition at the Amelia Earhart Airport.

DECEMBER 2017

8* Oshkosh (KOSH) Wis. - **Wright Brothers Memorial Banquet** at the EAA Aviation Museum featuring Astronaut Joe Engle as speaker. Purchase tickets at EAA.org/WrightBrothers. 920-426-6510.

10* Watertown (RYV), Wis. - **99's Pancake Breakfast** from 8am-Noon at the Watertown Airport.

JANUARY 2018

24-27* Sebring, Fla. - U.S. Sport Aviation Expo at Sebring Regional Airport.

FEBRUARY 2018

11 Mondovi, Wis. - Log Cabin Airport Winter Fly-In. 44-34-29.8700N 091-32-49.5600W Elevation 850' Frequency 122.90 logcabinairport@tcc.coop

APRIL 2018

21 Bloomington, Minn. - Minnesota Aviation Hall of Fame at the Hyatt Regency Hotel. Registration is available January 1. www.mnaviationhalloffame.org

28 Oshkosh (KOSH), Wis. - French Toast Breakfast & explore the aviation training hangar and labs, visit with faculty and try out our full-motion Redbird flight simulators at S.J. Spanbauer Aviation & Industrial Center 8am-Noon. 920-236-6112. frost@fvtc.edu

MAY 2018

6-8* Wisconsin Dells, Wis. - Wisconsin Aviation Conference at the Wilderness Hotel & Golf Resort. wiama.org *(NOTE DATE CHANGE)*

18-20 Brainerd, Minn. - Minnesota Seaplane Pilots Association (MSPA) Safety Seminar, Madden's on Gull Lake. www.mnseaplanes.com

JUNE 2018

2-3 Blaine (KANE), Minn. - Discover Aviation Days at Anoka County - Blaine Airport. 763-568-6072.

JULY 2018

7* Starbuck (D32), Minn. - Pancakes by Chris Cases, sausage, coffee & water 7am-Noon. Float planes welcome to land on Lake Minnewaska. Held in conjunction with Heritage Days, a short 1/4-mile walk. Overnight camping with modern AD building with showers.

23-29 Oshkosh (KOSH), Wis. - **EAA AirVenture Oshkosh 2018.** EAA.org/WrightBrothers 920-426-6510.

AUGUST 2018

12* Lino Lakes (8Y4), Minn. - Minnesota Seaplane Pilots Association Pig Roast at Surfside Seaplane Base.

For More Listings, Information & Updates Go To www.midwestflyer.com (Calendar Of Events)

Email Calendar Listings To info@MidwestFlyer.com - OR - Post Online "Calendar" www.MidwestFlyer.com

PLEASE SEND YOUR LISTING TO US AT LEAST 90 DAYS PRIOR TO THE EVENT.

Wright Brothers
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Keynote Speaker: Astronaut Joe Engle

Join EAA and astronaut Joe Engle as we celebrate the advancements in aviation since the first powered flight in December of 1903. The evening includes cocktails, dinner, and presentation by Joe about his time as a U.S. Air Force test pilot and NASA astronaut. In addition to flying the North American X-15, he was shuttle commander on test flights and mission STS-51-I. Reservations are required and space is limited!

Purchase your tickets at
EAA.org/WrightBrothers

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PILOT'S DREAM HOME FOR SALE: Custom Timber Frame with heated hangar and 1400 ft. landing strip! 3 BR, 4BA, 4000+ sq feet, 20 acres. Hutchinson, Minnesota. Seller financing available. Call or Text **612-978-2424.**

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MICHIGAN - TORCHPORT AIRPARK (59M), 100+ acres adjacent to busy main highway. $929,000. www.torchport.com. **231-632-2412.**

1979 CESSNA 421C, 4288/109/474, G430W, spoilers, 234 Gal, excellent P&I, very nice! $325K. 1976 Aerostar Superstar 700, 5200/900/900, G430W, EX500, Machen upgrades: $130K. 2005 Maule 180, 1600TTSNEW, 1 owner: $89K. 2005 Cessna Turbo Skylane C182T, 1400 SNEW, G1000: $227.9K. **Gavin Leake,** Spring City Aviation, Inc. **218-280-2615 www.springcityaviation.com**

WANTED – Aircraft paint shop or other aviation business seeking a location in east central MN. New beautiful hangar, public-use airport, asphalt ramp/runway. Call **Brian** at Eagle Air at **320-384-6667.**

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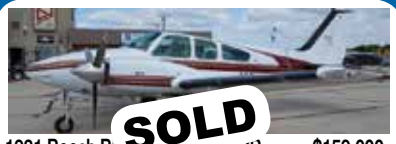
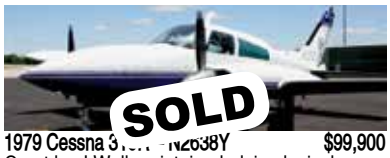


1981 Beech B[illegible] N2367P $159,000
3490 TT, 885/26 SMOH! NDH, Fresh Annual GNS-430W, KMD-250 MFD with KDR-610 Datalink, KFC-200 A/P, full deice, excellent P&I.

1984 Cessna 340A RAM VII – N97PT.....$279,500
Second to last 340A made! 3810 TT, 618/265 SMOH RAM, NKDH, 180 gal. fuel, dual 430s, KFC-200, VGs, Intercoolers.

1970 Mooney M[illegible] N9500V $42,500
6015 TT, 250 SMOH, 192 SNEW 3-bladed Hartzell prop, King IFR, lots of mods, good paint.



1979 Cessna 3[illegible] N2638Y $99,900
Great buy! Well-maintained, deiced, nicely equipped. Fresh February Annual, Garmin 430W, Primus 200 color radar, KFC-200 AP/FD! 406 ELT, GAMI, 203 gallons! 9515 TT, 1170 SMOH.

1973 Cessna P337 Skymaster – N337JJ $75,000
GNS 530W/430W, S-TEC 55X, EX-500, GDL-69, Flint Tip Tanks, Horton STOL, spoilers & much more! 3615 TT, 600 SNEW/910 SFRM.

1979 Piper Navajo C/R – N56ND $279,000/Trade
Full Panther Conversion! 4-blade Q-tips, winglets, VGs, 6760 TT, 740/920 SMOH, known ice, A/C, oxygen, GNS530, KFC200 AP/FD/HSI, radar. Professionally managed. Sold with fresh annual.

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DIALOGUE FROM PAGE 7

The day in which boards of directors of state aviation trade groups are willing to travel great distances to meet on a regular basis, are also gone, and no longer necessary with the advent of teleconferencing, which takes less time, is less expensive, and encourages greater involvement and participation.

In summary, we feel that state aviation trade groups can serve a useful purpose and can thrive using all-volunteer boards of directors, but the goals and objectives have to be realistic, and directors have to be willing to make a commitment and accept a certain amount of responsibility. Otherwise, they are just going through the motions and doomed for failure. ❑

EAA/DAHER FROM PAGE 32

The experience I had this summer was all that I had expected, and yet so much more. Not only was the internship an excellent opportunity to gain experience in Customer Support, it was also immensely beneficial in seeing the many career opportunities within aviation. From attending Paris-Le Bourget and Oshkosh, to touring Daher and Airbus, I am extremely grateful to Daher to have had all of these experiences.

Although my internship has come to an end, I am excited to begin my senior year at the University of Wisconsin, and look forward to my future in aviation.

EDITOR'S NOTE: Anyone with questions about the EAA/DAHER International Scholarship and internship program, may contact Michelle Peterson at Michelle.Peterson36@gmail.com. ❑

Fighter Ace Robin Olds Honored In New Uflytv Documentary

OSHKOSH, WIS. - Triple Ace fighter pilot, Robin Olds, is being recognized for his military achievements in a one-hour documentary video. The film is presented by The Fagen Fighters World War II Museum as a part of its ongoing HD video series: "Voices of Valor." The film is expected to become a part of the Uflytv library.

The recounting of Old's life was co-authored, hosted and narrated by Olds' daughter, Christina. Sleeping Dog Productions produced the film for Uflytv.

Robin Olds (July 14, 1922 – June 14, 2007) was an American fighter pilot who shot down 16 enemy aircraft during tours in World War II and Vietnam. A graduate of West Point, Olds entered the U.S. Army Air Corps and stayed with it during its transition to the U.S. Air Force. Before retiring in 1974, Olds achieved the rank of brigadier general. In combat, he flew the P-38, P-51 and F-4 Phantom. He was credited with 12 kills in World War II and he took out four MIGs over Vietnam. He flew 107 missions in Europe and 152 in Southeast Asia. Olds was an intensely dedicated pilot and a colorful figure on and off duty. His accomplishments are an inspiration, to emerging fighter pilots, even today.

The inspirational career of fighter pilot, Robin Olds, is depicted in a new documentary coming to Uflytv.

Uflytv is the "aviation channel" of television. It currently offers, on a subscription basis, access to over 220 aviation films, varying in length from 3 minutes, to an hour. For more information visit: Uflytv.com. ❑

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