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TWIN & TURBINE • 1 **April 2017**

editor's briefing by Dianne White

There are no happy endings. **Endings are the saddest part.** So just give me a happy middle, And a very happy start. - Shel Silverstein

n March 6, a storm system ripped through the Midwest, forming a line of thunderstorms from Oklahoma to Canada. By the time the line reached Kansas City, tornado warnings were plentiful, and the local weathermen were interrupting regular programming with live reports. Having lived in the Midwest all my life, this kind of thing is normal. As long as I am on the ground and my airplane is safely tucked away in its hangar, the weather geek in me takes secret glee when I see the anvil shelf to the west. There's nothing more fascinating than to see the curtain of rain approaching, hear the chest-rattling thump of thunder, and smell the ozone in the air.

Or at least I felt that way until the evening of March 6.

After the line raced through around 8:30 p.m., we were surprised to get a call from a friend: "You better get to the airport now." Straight line winds clocked at 87 mph had pummeled the Johnson County Executive Airport (KOJC).

By the time we pulled up, there were a small crowd of aircraft owners and pilots huddled together on the ramp, squinting into the darkness to see the damage. A few ventured close, but backed away at the strong smell of avgas and the knowledge that multiple Cirrus aircraft (with their parachute rocket) were in the mess.

In the harsh morning daylight, the devastation was stunning and heartbreaking. One entire hangar row was destroyed with three others severely damaged, with unrecognizable metal and steel intertwined with dozens of aircraft. Some barely resembled

> airplanes, with the empennages ripped from the cabin, wings snapped off at the root, and others laving belly up and fileted on the ramp. Some owners wept, others stared glassy-eyed and resigned, while others could only stare and shake their heads in disbelief at the obscene spectacle.

> My husband and I were hopeful our two aircraft would be unscathed, but by the time we were permitted to get close, we knew it wasn't the case. The winds had beams around each other like twist-

ties was dizzying, especially because we knew our beloved bird was buried in there. There was nothing really to see: The plane was completely shrouded in remains of the two hangar doors.

However, it was more important that I see the condition of our second aircraft: a tropical orange and brown-accented Cessna 172M that my mother bought new in 1975. This is the plane I learned to fly in, as well as my oldest daughter now at the U.S. Naval Academy pursuing a Naval aviation career. If you are a long-time Twin & Turbine reader, you may recall in February 2011 I wrote about the emotional moment when my mother passed on the keys to her cherished aircraft after she lost her FAA medical.

The deputy director of the county airport commission, knowing how important this little bird is to me, provided a personal escort to the hangar, which sustained damage but was still standing. A peek inside revealed she had weathered the storm unscathed, although now covered with a thick coating of insulation and dirt. The little inexpensive bird that is worth a million to me was okay; I hugged my friends while I cried tears of relief.

As thoughts turn to the clean-up process and insurance settlements, I couldn't help but ponder: What is it about airplanes that gets us in the "feels?" Sure, they are nothing more than complicated machines made of aluminum, carbon fiber and Plexiglas. However, just about every pilot I know is guilty of anthropomorphism, having developed a love affair with one or more aircraft they've owned. These aircraft do more than get us from point A to point B. They are our magic carpets, our time machines and life-partners who take us on adventures to new places and experiences. They give us the ability to take in tapestries of water-colored skies, stunning cloudscapes, and exquisite sunrises and sunsets unseen but for the few who happen to be airborne at that moment. They bring us together with loved ones and dear friends.

And when they hurt, we hurt, too.

No two flights are rarely the same. Sometimes the flight is challenging and tests our skills, and we are relieved when we reach for the fuel cutoff lever for shutdown. Other times, it's a picture-perfect journey and the taxi in is a bittersweet moment as we relish the memory of a perfect flight and wish it wasn't over so quickly. We are a lucky bunch, us pilots.

Shel Silverstein is right: endings aren't the point. I'd much rather to stay in the "happy middle" of as long as possible.



Airmail

Kudos to Kevin Ware's "A Hole in the Ice"



ust wanted to send a quick note to say how much I enjoyed Kevin's article (February 2017), and appreciated the discussion of the analysis that went into the go decision, and to how he flew the descent and approach.

I fly a Baron in the Great Lakes area, so while I can't completely appreciate all that goes into this decision making, but there are certainly parallels. Baron 8TH has boots, a hot window plate, hot props, pitot, etc., so it's pretty capable. But I can't get over stuff at FL430, so the on-the-ground analysis of my options is awfully important, and the quick descent strategy has worked for me as well.

Thanks for a terrific article.

Mike Lepore Riverwoods, Illinois TED

Commander is a Pilot's Airplane

've been a Twin & Turbine reader since the dawn and read the latest On Final by David Miller (March 2017) with interest. A friend and I owned Twin Commander 1000 N79PH for 12 years. We got jet fever and moved to an Embraer Phenom 100 N43EP for the last seven years. The Phenom has been a great airplane, but the Commander remains a favorite.

There is a dramatic difference between the Commander 840 and 1000. The latter were the last 100-plus planes built and offer FL350 ceiling, 300 knots cruise speed, and 1,800 nm range. With something like 20 North Atlantic crossings in this plane, the long range was a marvelous asset. For instance, my wife and I flew non-stop from Rotterdam, The Netherlands to Crete, Greece.

The other issue is the Commander, like any turboprop, has none of the contaminated runway issues of a jet. During a New England winter we are locked out of many airports with the Phenom, that would be open to a Commander especially with reverse prop thrust.

The Commander 1000 does not have the big picture windows in back, and new thick windows and better soundproofing make it a very comfortable aircraft. Flown solo with a light fuel load the plane has the same gross weight and horsepower as a P-51 Mustang. The initial climb rate is phenomenal.

Finally, I heard long ago, "The Commander is a pilot's airplane; the King Air is a passenger's airplane."

John Wood

Concord, Massachusetts (TET)



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Legally Speaking by Jerry H. Trachtman

Unintended Consequences



Avoid turning an inadvertent act into enforcement action.

You have received your clearance for an IFR departure from your home airport, which includes "climb and maintain 5,000 feet." The tower clears you for takeoff, and adds, "Amend your initial altitude, climb and maintain 1,500 feet."

You take off, and the tower tells you to contact departure. You contact departure, and the first thing the controller says is, "Radar contact, say altitude." You look at your altimeter and see you are approaching 3,000 feet. You tell the controller, "Sorry, do you want me to descend?" He replies with a heading change to avoid a traffic conflict, and clears you to 5,000 feet. He tells you, "Possible pilot deviation call (555) 555-5555 when you land."

You are familiar with the Aviation Safety Reporting Program and decide you need to file a NASA report, because that will get you off the hook for an altitude bust if an enforcement action is initiated against you – or will it?

FAA Advisory Circular 00-46E describes the Aviation Safety Reporting Program (ASRP), and talks about what is well known among pilots as a "NASA report." Under the ASRP, if there is a violation of FAA regulations and the pilot proves that within 10 days after the violation (or the date the pilot became aware or should have been aware of the violation) he or she delivered or mailed a written report to NASA (the "NASA report"), a finding of a violation can be made but there will be no certificate suspension imposed.



The only catch is that there are exceptions. The violation cannot involve a criminal offense, an accident, or an action under 49 USC 44709 (a "709 re-examination"), which discloses a lack of qualification or competency. In addition, there cannot have been a prior enforcement action resulting in a finding of a violation of regulations within the previous five years. Finally, and what seems to result in the most FAA challenges to using a NASA report (using it is not the same as filing it), the violation must be "inadvertent and not deliberate."

You properly completed your NASA report and filed it on time, and you are hoping that if an enforcement action is brought against you and you decide to use it, the FAA will accept it and agree to a waiver of sanction. Your altitude bust was certainly inadvertent and not deliberate, right?

Not so fast. According to the FAA, "inadvertent" and "not deliberate" are

two entirely different things, and a violation must be both to qualify for an ASRP waiver of sanctions. According to the FAA, even if a violation is "not deliberate," it can still fail to qualify for immunity because it is not "inadvertent." Are you still with me?

In coming to this conclusion, the FAA usually hangs its hat on a 1982 case decided by the Ninth Circuit Court of Appeals. In that case, a scheduled airline flight unknowingly landed at the wrong airport. The FAA brought an enforcement action against the captain and issued an order suspending his ATP certificate for 60 days. The captain had timely filed a NASA report and claimed he was entitled to a waiver of the suspension because landing at the wrong airport was "inadvertent and not deliberate."

The FAA disagreed. An evidentiary hearing was held before an NTSB administrative law judge (the first level of appeal of an FAA order of suspension) and the 60-day suspension was upheld. On the next level of appeal to the full NTSB, the 60-day suspension was again upheld. The NTSB decision was then appealed to the Ninth Circuit Court of Appeals. In its decision, the Court of Appeals acknowledged that the FAA had agreed landing at the wrong airport was not deliberate. The captain argued that "not deliberate" and "inadvertent" mean the same thing, but the Court of Appeals disagreed and stated:

"It is evident an inadvertent act is one that is not the result of a purposeful choice. Thus, a person who turns suddenly and spills a cup of coffee has acted inadvertently. On the other hand, a person who places a coffee cup precariously on the edge of a table has engaged in purposeful behavior. Even though the person may not deliberately intend the coffee to spill, the conduct is not inadvertent because it involves a purposeful choice between two acts - placing the cup on the edge of the table or balancing it so that it will not spill. Likewise, a pilot acts inadvertently when he flies at an incorrect altitude because he misreads his instruments. But his actions are not inadvertent if he engages in the same conduct because he chooses not to consult his instruments to verify his altitude."

The Court of Appeals concluded that since the captain purposely chose not to examine his charts to verify the location of the airport, and purposely

chose not to use available navigation aids to positively identify the airport, landing at the wrong airport was the result of purposeful choices and therefore was not inadvertent.

While the FAA would agree your altitude bust was not deliberate, since you did not monitor your altitude in the climb the FAA can say it was not inadvertent, and a NASA report will not give you immunity from a suspension if an enforcement action is brought against you.

Perhaps the moral of the story is to monitor your instruments at all times, but misread them whenever possible. Please do not tell anyone, especially the FAA, I said that.

Jerry H. Trachtman is a boardcertified aviation attorney who has been practicing law since 1976. He is a Piper Meridian owner-pilot and regularly speaks on aviation legal topics at aviation events.









Sometimes the act of giving back comes in small packages. This Angel Flight passenger discovered the fun of flight while receiving transportation on Joe's Citation Mustang.

If you're like me, you want to pay it forward. You want your good fortune to benefit those who need it most. If it could be combined with flying, all the better.

My goal in writing a series on charitable flying is simple: to encourage more cabin-class and turbine aircraft pilots to consider flying for charitable organizations, even if it is just a few times each year. I'm not going to promote any one organization over any of the others. Rather, I simply hope that you will come away with a curiosity and desire to connect with at least one of the many charitable flight organizations that might fit your passion for helping others. I'll provide a list of organizations in the final installment of this series.

This month I'll cover the "why" of flying for charitable flight organizations. In the next installment, I'll cover the "how," and after that I'll wrap it up with a final installment on the "who" in charitable flying.

Before I make a case for why YOU should explore becoming a volunteer pilot for one of these organizations, indulge me for a moment as I tell you how I got into charitable flying for Angel Flight Central.

As a newly minted private pilot in the summer of 2009, I rolled directly into training for my Instrument rating. As I contemplated all the freedom that seemed to come from being a pilot, I came across a Saratoga TC II for sale at my local airport. This was an amazing machine with not too many hours and a beautiful Garmin G1000 avionics package. That seemed like the



perfect airplane for me and I quickly learned all I could about what airplane ownership might mean for our family.

As I explored the possibility of buying this awesome flying machine, the seller's broker told me that it was used frequently by the current owner to fly sick people to their medical treatment, for an organization called Angel Flight Central. **The idea of using an airplane to help others had never occurred to me before, but it seemed like a really cool way to give back to others**. I told myself that if I was lucky enough to actually own an airplane, and hopefully this one, that I would continue that tradition of using it to help others as well.

My wife and I did buy that airplane, but we never actually flew an Angel Flight mission in it. We only owned the airplane for three months before we realized that we needed a more capable airplane, a Piper Meridian, which we purchased in December 2009. It was in the Meridian that I finally accumulated the 500 hours of flight time needed to qualify as an Angel Flight Central pilot.

The promise I made to myself to use our airplane to help others never faded, and we've been using our airplane for Angel Flight missions on a monthly basis ever since. To date, my wife and I have flown more than 100 Angel Flight Central missions; around 20 of those in the Piper Meridian and the rest of them have been in our Cessna Citation Mustang, which we purchased in December 2012. We typically see between 10 and 20 percent of our logbook hours each year dedicated to flying charitable missions.



(Standing rear) Joe and Sandy Ratterman's Angel Flight mission for this family is an example of how some trips couldn't be practically made in anything but a private jet.





Many of the Angel Flight missions that Joe and Sandy fly are children. Providing transportation to specialized medical centers in other cities is a tremendous benefit for families going through some of the most difficult times of their lives.



The reason I wanted to share our story is two-fold: First, it goes to the heart of why pilots use their airplane to help others. It's a really cool way to give back out of the abundance of blessings we have been given as pilots and aircraft owners. And second, to highlight that these missions aren't just

for pilots of small piston aircraft, but rather, charitable flights make just as much sense, if not more, for owners and operators of more capable and more expensive turbine aircraft. By the way, if you are reading this article, that's probably you!

Many of the missions we have completed in our Mustang could not have been practically flown in smaller piston airplanes. I'll get to more of that in the third installment when I talk about the "who" of charitable flying. For now, let me share five reasons "why" you might want to look into becoming a volunteer pilot.

Reason 1: The people you will help are truly in need and often have no other practical way to keep up with the repeated trips for treatment and checkups. The individuals that we fly are going through a really difficult time in their life, and the relief that we provide by flying them in a private plane can be huge. Typically the treatment they are getting is far away and can take a big toll on them. So, making the trip to and from these medical centers as comfortable and stress-free as possible makes a big difference (more than you may realize).

Reason 2: Pilots like to fly, at least that's what I've heard anyway. These missions are a great reason fly and bring real purpose to your trips. If you aren't getting as many hours as you want in your logbook each year, a few



charitable trips can be a nice way to keep you in the air.

Reason 3: Flying passengers, especially when they aren't your friends or colleagues, can really up your game! There is something about having precious cargo in the airplane that will force you to tighten up your tolerances, smooth out those turns, and grease those landings. When you fly people that you just met on the day of the trip, it feels a bit like flying a commercial airplane, with people in the back that are counting on you to safely transport them from point A to point B. "Pilot in Command" and "Captain" take on a whole new level of reality on these flights, and that tends to make us better pilots.

Reason 4: Depending on your specific tax situation, and how you account for the operation of your airplane, it is possible that you may be able to deduct some or all of the direct operating expenses associated with charitable flights. None of the charitable organizations provide expense or fuel reimbursement for their flights, but some of that expense can likely be reported as a charitable donation on your taxes each year. I recommend that you check with a tax professional to determine if there would be a tax advantage for your specific situation.

Reason 5: This cannot be overstated: It's a great way to give back — if you are in to that kind of thing.

Next month I'll cover some of the logistics and operational aspects of charitable flying, and you'll see that its easier than you might have thought to incorporate charitable flying into your schedule.

Joe Ratterman is an ATP pilot, type-rated in the Cessna Citation Mustang C510, with 2,500-plus hours in his logbook. Joe retired from a successful corporate executive career in 2015 and now flies as a professional charter pilot for Kansas City Aviation Company (KCAC) based in Overland Park, Kansas. He is also the current board chairman/president for Angel Flight Central.

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A glimpse inside the glamorous life of a corporate pilot

by Kevin Ware

e arrive in Reno following a very bumpy descent out of FL410, with 25-knot crosswinds on the approach to 16L and a nasty wind shear being advertised by the tower. Our four veteran business jet passengers are on a recruiting trip for graduates of the construction management program at the local college and they hustle off the airplane with a full schedule and all kinds of other activities in mind, leaving TL (the other pilot) and myself to figure out what to do with ourselves for the next two nights and three days.

The trip down was all business as usual from a pilot's point of view. We left KBFI in the Lear 40 with a 1,500 overcast, 4-mile visibility and winds from the south, but a bit wet and unable to decide if they wanted to blow at 25 or 35 knots. All this being due to a large low pressure system from the Gulf of Alaska and now approaching the Washington coast, causing the local barometric pressures to drop like a rock. When the barometric pressure drops, it acts like a huge vacuum, pulling air and moisture in from hundreds of miles around the center low pressure in a counterclockwise, circular motion. Hence, the rain and winds from the south.

After takeoff, we encountered the expected low-altitude turbulence, then had about 20,000 feet of fairly smooth air, followed by all kinds of warnings from Seattle Center about icing, turbulence and tops above 30,000 as we approached the edge of the low-pressure system near the Oregon border. Our solution was to keep the climb rate up so we could top the system by the time we got there. It worked out fairly well, as we crossed the Columbia River at FL380 in smooth, clear air, listening to the turboprop commuter traffic beneath us looking for ride reports in all directions.



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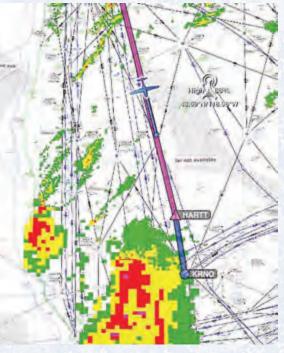
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Thirty minutes later, we were over southern Oregon at FL410 looking through the reflections on our iPad screens at ominous areas of red areas over Lake Tahoe, moving slowly east and dropping ice and wet snow over the west side of Reno. The question was, would we beat the weather to the airport? When we were 10 minutes out, inbound on the HARTT One arrival, approach was reporting winds 200 at 30 knots gusting to 45, with significant wind shear below 1,000 feet AGL, but visibility good at 10 miles with 2,600 broken with 16R and 16L in use.



Breaking out of the clouds at about 2,500 feet in light rain doing Vref+10, we could see a gray curtain of snow mixed with rain to the airport's west, with occasional flashes of lightning penetrating that gloom. We land just before it covers the airport. On the ramp at Atlantic Aviation, we find the linemen already have our rental cars out and running, making the baggage transfer from airplane to car in the worsening mixture of snow and rain a quick task.

Now with the airplane safely put away in the hangar and our passengers gone, we face what is our most challenging conundrum...what to do with ourselves for the next three days and two nights. By comparison, if this had been a personal flight in my Cessna 340, I would have arrived with some specific purpose or schedule in mind, most likely with my wife or family members on board. But this is rarely so when you fly for pay. You often find yourself with several days with nothing to do other than just wait. In addition, some of the destinations that might seem to be glamorous at first pass, lose their glitter once you've been there often enough.

Faced with this problem, almost always the first topic for professional crews is what to do about dinner. And for veteran pilots a lot the glitzy, expensive places advertised in the airline magazines lost their attraction long ago. No, for most of us it must be some place where the tourist crowd never goes, preferably a little on the exotic side, hard to get to, and ideally cheaply priced. Generally, one of us will always at least claim to know of such an eatery no matter where we are in the country.

After some discussion, TL says he has a hankering for German food, which sounds fine to me. As I drive up to the Marriott, he is already punching in the location of a what he says is one of the best German restaurants in the country, and it is right here in Reno. When the location comes up on his cellphone map, it is quite apparent that the only tourist we will meet in that isolated part of town is a mugger out on parole, and maybe some illegal drug salesmen. I mention this and TL does admit with considerable satisfaction that "yes, it is indeed in the 'bag lady' section of town."

We check into the hotel then head over to the famous German restaurant with me driving through the rain. TL is navigating and calling out "90-degree left now" and "clear right" whenever we enter an intersection. We have been flying together for some time and CRM habits are hard to drop.

Finally, after getting lost in an abandoned industrial park, we arrive at the German restaurant just after dark on a moonless night. Near the door, we can see a gang of local residents hanging out, admiring each other's plentiful and crude tattoos, smoking and looking for handouts. Others are pushing their life's accumulation of worldly possessions through the large and empty parking lot in rusty Safeway shopping carts, with creaking and worn-out wheels.

Seeing only one other car present in the lot, I mention to TL that all this is not a good sign for a restaurant at the dinner hour. He assures me that contrary to all appearances, this place is a true "pilot's find." Nodding to the intimidating door greeters, we enter to find 30 tables nicely laid out with white tablecloths and silverware. Except for one other couple, it is absolutely empty. The waitress who has a distinct



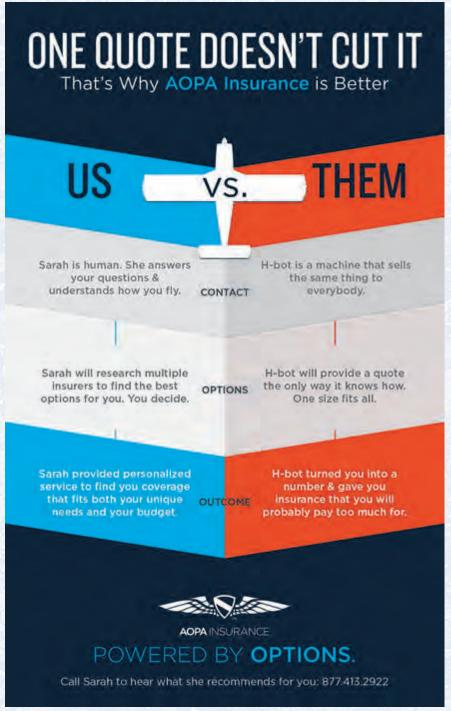
Pilots pride themselves on being excellent sleuths for finding great restaurants off the beaten path. Sometimes, however, the results turn out to be not so great.

German accent, smiles and offers us any table we want. I ask why is the place so empty, and she says that it is raining. When that happens in Reno, people just don't go out. Sounds reasonable to me. Maybe we should have stayed at the hotel ourselves

But the waitress turns out to be exceptionally friendly, and after we share that we are professional pilots, we get into a long conversation about her accent. She reveals she is a former TWA stewardess who has lived and traveled throughout most of the world. She says she was born in Germany, but after school was unable to get hired Lufthansa because her English "was not good enough," yet then was immediately hired by TWA because of her great facility in languages. Her level of attention as a waitress is reminiscent of someone accustomed to working the first-class section of TWA Lockheed L1011s in the good old airline days, when service meant something, and the three crew members in the pointy end of the airplane got the best treatment of all.









Sometimes the most challenging part of being corporate pilot is figuring out what to do while waiting to fly the return leg of a business trip.

When she puts down large glasses of cold beer, and warm, fresh bread, TL asks about ordering something not listed on the menu, to which she cheerfully replies, "Something special for you...of course the chef will be glad to." We are halfway through our beer when a huge tray of sauerkraut, potatoes and German sausages of every known variety arrives. Later over freshly brewed coffee and apple cake, the chef himself comes out to inquire about the meal. We praise his skills extensively, and then ask about his accent. Turns out he was also born in Germany, immigrated to the United States and (befitting a true pilot's restaurant) then served as a crew chief on helicopters with the U.S. Army in Iraq. We thank him for his service to the country, pay the modest two-digit bill, then stagger out greeting the bag ladies and potential muggers out front as if they were our old friends. On arrival back at the hotel we decide to skip the free breakfast, and just sleep in.

The next morning after a breakfast that lasts from 11 a.m. to 1 p.m., we decide to visit one of Nevada's renown gun stores, this one with a target range known to be the training ground for gun-toting Nevada women. We first look over a huge inventory of guns of every make, model and purpose, then turn our attention to the soundproofed glass of the target range, where a group of Reno's finest young ladies are practicing their shooting skills, many with rather large, 9 mm Glocks. Most are deadly placing kill shots on paper targets. We could not help but notice all their targets are males who look a lot like us. After a couple of hours of this intimidating activity we elect to return to the hotel to take a nap and then consider dinner choices.

Later, after a careful discussion that takes longer than planning a flight to Europe, we decide it is steak night. We are told by a local that there is an excellent steakhouse about 15 miles away in a remote northeast corner of town that has five stars and rave reviews. We head over there and arrive to find a crowd of most unattractive, poorly clothed, severely overweight people of both sexes, smoking and lounging around outside the entrance. Not a good first impression. We enter and work our way to the restaurant area in near zero-zero visibility from all the cigarette smoke, through a forest of slot machines occupied mostly by wrinkled women who look like they are not slept in months. We signal to the hostess that there are just two of us for dinner. Ignoring that at least half the tables are empty, she says that there will be at least a two-hour wait, then with a firm but meaningful smile, invites

us to use the nearby slot machines until our table is ready. We might be pilots, but that doesn't mean we are entirely stupid. The restaurant is obviously devoted to losing gamblers, not hungry, steak-eating aviators, and so decide to go somewhere else where our type is more commonly seen and welcome. For our last fabulous, professional pilot, expense account dinner in Reno, we settle for the "In and Out" Burger joint located near the hotel.

At around 10 a.m., the next morning we have the Lear fueled, plus coffee and ice boarded. The weather system from two days prior has blown through, and that for the return trip is essentially clear. Our passengers arrive 30 minutes early, and we are airborne 15 minutes later. We make the Mustang 8 departure, and are shortly thereafter cleared direct to the Olympia VOR about 600 nm to the northwest, which is the entry point to the OLM Two arrival for Boeing Field. We have fun skimming along at 250 knots over the top of a 5,000-foot broken layer, then drop down to 3,000 feet and request the Harbor Visual arrival into Boeing Field (KBFI). We grin following our smooth landing 13R, and exit right in front of the Clay Lacy FBO at A9 with only the slightest braking required. Our passengers smile and nod as they get out, and we head home for dinner.

Truth is, most professional pilots will fly for free, it is figuring out what to do while waiting that we want to get paid for.



Kevin Ware is an ATP who also holds CFI, MEII and helicopter ratings, has more than 10,000 hours and is typed in several different business jets. He has been flying for a living on and off since he was 20, and currently works as a contract pilot for various corporate operations in the Seattle area. When not working as a pilot he is employed part time as an emergency and urgent care physician. He can be reached at kevin.ware2@aol.com



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by Rebecca Groom Jacobs

WHO:

Randy Harmon - Owner

COMPANY:

Harmony Air Flight school, aircraft rental, aircraft management, charter

WHERE:

Nashville, TN

QUALIFICATIONS:

Lt Col, USAF (Ret) CFI, CFII, MEI, CSIP, AGI, SES, ATP

1. Can you describe the mission of Harmony Air?

Currently, we operate with 12 pilots and 18 aircraft (we began with just three pistons back in 2006). All of our pilots are instructors. We are constantly training in both piston and turbine aircraft – Cirrus SR22, Cessna Caravan, Beechcraft Baron, King Air 350, Phenom 100, Decathlon, you name it. In addition to training, we manage and charter aircraft. Nashville is a prime spot for charter. It is an entrepreneurial city with a big understanding of how airplanes can provide value to personal life ... but you've got to have a niche in order to be successful in this industry. Our niche is doing a lot of things, and we've sought to become experts in a variety of airplanes.

2. How did Harmony Air become a go-to for local Nashville stars?

It started when we gave flight lessons and developed relationships with folks who worked in country music management. Through those connections, Tim McGraw was the first singer to hear about us and reach out – which led to us teaching him to fly in a Cirrus. Not long after, fellow country singer Dierks Bentley was on the lookout to earn his instrument rating in his own Cirrus and Tim recommended us. It has just evolved from there. Along the way, we have instructed and/or managed aircraft for Luke Bryan, Reba McEntire, Blake Shelton,

Kelly Clarkson, Chris Janson, Miranda Lambert and others. We also train and fly a number of people in the healthcare and hospitality industries.

3. When did Harmony Air incorporate turbine aircraft to the fleet?

In 2010, we added and managed a Phenom 100 for Reba McEntire. Since then, we have helped several others make the jump up into turbines as well (like the Caravan and King Air 350). When looking for a new airplane, it is all geared toward the mission and costs. We'll walk clients through the entire process research, demonstrations, financials, negotiations, etc. The core motivator we see for folks wishing to step up to a turbine aircraft is reliability. Many times, our artists fly late at night after concerts, with departures often taking place past midnight. Multiple, dependable engines is hugely appealing to this audience.



Country singer Dierks Bentley completed his multi-engine rating in a Beechcraft Baron at Harmony Air.



4. What is the typical mission for a country music star?

As you might guess, the country music group is typically utilizing aircraft for travel to concerts and shows all over the country. But what they're ultimately doing is keeping their families together. I can assuredly say that is priority number one across the board. As I mentioned, charter is popular, but what we see with our clients in particular is

that they like to know who they are flying with. They're a very savvy crowd — either they are pilots themselves or just seek to be knowledgeable about the airplane and crew. Plus, unlike other charter operations, we are based in Nashville. Our clients can call any time of the day or night — our cell phones are on. They choose and stay with Harmony Air because they trust us. We take a lot of pride in that fact.

5. Can you give an example of one of those calls?

A couple of years ago, I received a call from Luke Bryan's tour manager at 5:30 a.m.; I had yet to meet Luke at that time. His bus was broken down somewhere in Indiana, and he needed to get back to Nashville in time for a recording session. After calls to numerous music contacts, his manager was finally given my number. I jumped out of bed and into an airplane to Indiana. By 9:30 a.m., Luke was in Nashville recording. And he has been flying with us ever since.

Photos Courtesy of Harmony Air





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he Cessna Citation Sovereign+ and the Citation Latitude have attained FAA and EASA steep approach certification, adding operational capability to the midsize business jets. The certification allows the aircraft to fly approach angles of up to 6.65 degrees, which is necessary to access European destinations such as London City Airport (LCY) and Lugano Airport (LUG) in Switzerland. The steep approach capability for both Cessna Citation models will come standard.

"This steep approach certification for the Sovereign+ and Latitude further enhances the advanced capability of these industry-leading aircraft, particularly for customers flying in Europe where terrain or environmental regulations often require this increased capability," said Rob Scholl, senior vice president, sales and marketing.

Due to its downtown location next to London's financial district, London City Airport is one of the more prominent business destinations in Europe, but requires aircraft use a steeper 5.5-degree approach due to environmental regulations, compared to a more typical airport approach of 3.0 degrees.



he third and final Pilatus PC-24 prototype, P03, which also represents the series aircraft standard, completed its first flight March 6 from Buochs airfield in Switzerland. The jet, registration HB-VSA, flew for two hours and five minutes within central Switzerland. This flight marks another important

milestone in the Pilatus PC-24 development program.

The aircraft, designated as P03, joins the first two test aircraft, which began flying May 2015 and November 2015 respectively. The first two prototypes have flown 1,350 hours to date, including numerous significant test flights. P03, which represents a conforming aircraft, will be used for certification flights and marketing.

Continued on page 26.



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CHIEF PILOTS & OWNERS Aircraft Count

- 4 AIRBUS ACJ319
- 32 ASTRA 1125
- ASTRA 1125SP
- ASTRA 1125SPX
- **BEECHJET 400**
- **BEECHJET 400A**
- **BOEING BBJ**
- **CHALLENGER 300**
- **CHALLENGER 600**
- **CHALLENGER 601-1A**
- **CHALLENGER 601-3A** 133
- **CHALLENGER 601-3R**
- **CHALLENGER 604 CHALLENGER 800**
- **CITATION 500**
- **CITATION 525**
- **CITATION BRAVO**
- **CITATION CJ1**
- CITATION CJ1+
- CITATION CJ2
- **CITATION CJ2+**
- **CITATION CJ3**
- **CITATION ENCORE**
- 306 **CITATION EXCEL**
 - 5 **CITATION I**
- 288 CITATION I/SP
- **CITATION II**
- **CITATION II/SP**
- **CITATION III**
- **CITATION MUSTANG** 329
- **CITATION S/II**
- CITATION SOVEREIGN
- 284 CITATION ULTRA
- 287 CITATION V
- **CITATION VI**
- 104 CITATION VII
- **CITATION X**
- CITATION XLS

- DIAMOND I
- DIAMOND IA
- **DORNIER ENVOY 3**
- **ECLIPSE EA500**
- **EMBRAER LEGACY 600**
- **EMBRAER LEGACY 650**
- **EMBRAER PHENOM 100**
- **EMBRAER PHENOM 300**
- **FALCON 10**
- **FALCON 100**
- **FALCON 200**
- **FALCON 2000**
- **FALCON 2000EX**
- **FALCON 20C**
- 17 FALCON 20C-5
- **FALCON 20D**
- **FALCON 20D-5**
- **FALCON 20E**
- **FALCON 20E-5**
- **FALCON 20F**
- FALCON 20F-5
- **FALCON 50**
- **FALCON 50-40**
- **FALCON 50EX**
- FALCON 900
- **FALCON 900C**
- **FALCON 900EX**
- **GLOBAL 5000**
- 112 **GLOBAL EXPRESS**
- **GULFSTREAM G-100**
- **GULFSTREAM G-200**
- **GULFSTREAM G-300** 8
- 27 **GULFSTREAM G-400**
- **GULFSTREAM G-450**
- **GULFSTREAM G-500**
- **GULFSTREAM G-550**
- **GULFSTREAM G-I**
- **GULFSTREAM G-II GULFSTREAM G-IIB**
- **GULFSTREAM G-III**
- **GULFSTREAM G-IV**
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 - **GULFSTREAM G-V**

- 40 HAWKER 1000A
- **HAWKER 125-1A**
- HAWKER 125-1AS
- HAWKER 125-3A/RA
- **HAWKER 125-400A**
- **HAWKER 125-400AS**
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- **JETSTAR 731**
- **JETSTAR II**
- **JETSTREAM 31**
- **JETSTREAM 32**
- **JETSTREAM 41**
- 15 LEARJET 23
- **LEARJET 24**
- **LEARJET 24A**
- **LEARJET 24B**
- **LEARJET 24D**
- **LEARJET 24E**
- **LEARJET 24F**
- **LEARJET 25**
- **LEARJET 25B**
- **LEARJET 25C**
- **LEARJET 25D**
- **LEARJET 28**
- **LEARJET 31**
- **LEARJET 31A**
- **LEARJET 35** LEARJET 35A
 - **LEARJET 36**

- 34 LEARJET 36A
- 24 LEARJET 40
- **LEARJET 45**
- **LEARJET 45XR** 115 LEARJET 55
- **LEARJET 55B**
- 12 LEARJET 55C
- **LEARJET 60**
- PREMIER I
- **SABRELINER 40 SABRELINER 40A**
- **SABRELINER 40EL**
- **SABRELINER 40R**
- **SABRELINER 60**
- **SABRELINER 60A**
- **SABRELINER 60AELXM**
- **SABRELINER 60ELXM**
- **SABRELINER 60EX**
- **SABRELINER 60SCEX**
- **SABRELINER 65**
- **SABRELINER 75 SABRELINER 80**
- **SABRELINER 80SC**
- **WESTWIND 1** 4 WESTWIND 1123 45 WESTWIND 1124

76 WESTWIND 2

TURBO PROPS

CHIEF PILOTS & OWNERS Aircraft Count

- **CARAVAN 208**
- **CARAVAN 208B**
- **CARAVAN II**
- **CHEYENNE 400**
- **CHEYENNE I** 14 CHEYENNE IA
- 303 CHEYENNE II
- 59 CHEYENNE III **CHEYENNE IIIA**
- CHEYENNE IIXL
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- **34 KING AIR 350C**
- KING AIR 90
- KING AIR A/B90 KING AIR A100
- **203 KING AIR A200**
- 58 KING AIR A90
- KING AIR A90-1 135 KING AIR B100
- 902 KING AIR B200
- KING AIR B200C
- KING AIR B200GT KING AIR B200SE
- KING AIR B200T
- **KING AIR B90** KING AIR C90
- 32 KING AIR C90-1
- 160 KING AIR C90A 316 KING AIR C90B
- 7 KING AIR C90SE
- **278 KING AIR E90**
- 160 KING AIR F90 17 KING AIR F90-1
- **MERLIN 300**
- **MERLIN IIA**
- **MERLIN IIB** 12 MERLIN III
- **MERLIN IIIA**
- 49 MERLIN IIIB 14 MERLIN IIIC
 - **MERLIN IV**

- 13 MERLIN IV-A
- 13 MERLIN IV-C
- 105 MITSUBISHI MARQUISE
- 1 MITSUBISHI MU-2D
- 29 MITSUBISHI MU-2F
- 1 MITSUBISHI MU-2G
- 22 MITSUBISHI MU-2J
- 32 MITSUBISHI MU-2K
- 15 MITSUBISHI MU-2L
- 23 MITSUBISHI MU-2M
- 30 MITSUBISHI MU-2N
- 38 MITSUBISHI MU-2P
- MITSUBISHI SOLITAIRE
- 673 PILATUS P-12
- 341 PILATUS PC-12 NG
- 549 PILATUS PC-12/45
- 154 PILATUS PC-12/47 18 PIPER 700P AEROSTAR
- 492 PIPER MERIDIAN
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- 4 SOCATA TBM-700C1
- 115 SOCATA TBM-700C2
- 318 SOCATA TBM-850
- 22 SOCATA TBM-900
- 6 STARSHIP 2000A
- **TURBO COMMANDER 690**

- **TURBO COMMANDER 840**
- **TURBO COMMANDER 980**
- **TURBO COMMANDER 1000**

- **TURBO COMMANDER 690A**
- **TURBO COMMANDER 690B**
- **TURBO COMMANDER 900** 16

TWIN PISTON

OWNERS

Aircraft Count

- 9 ADAM A500
- 1550 BARON 58
- 479 BARON 58P
- **BARON 58TC**
- 5 BARON A56TC 142 BARON G58
- 43 BEECH BARON 56 TC
- **BEECH BARON 58 PA**
- 217 BEECH DUKE B60
- 193 CESSNA 340
- 556 CESSNA 340A
- 120 CESSNA 402B
- **BUSINESS LINER CESSNA 402C**
- **38 CESSNA 404 TITAN**
- 288 CESSNA 414
- 374 CESSNA 414A
- CHANCELLOR
- CESSNA 421
- **CESSNA 421A CESSNA 421B**
- **CESSNA 421C**
- **CESSNA T303**
- **PIPER 601P AEROSTAR**
- 29 PIPER 602P AEROSTAR
- **PIPER CHIEFTAIN**
- 28 PIPER MOJAVE
- 870 PIPER NAVAJO
- 24 ROCKWELL 500 SHRIKE
- **ROCKWELL 500A SHRIKE**
- **ROCKWELL 500B SHRIKE**
- **ROCKWELL 500S SHRIKE**

ROCKWELL 500U SHRIKE

- 28 ROCKWELL 520 COMMANDER
- 15 ROCKWELL 560 **COMMANDER**
- 21 ROCKWELL 560A
- COMMANDER 17 ROCKWELL 560E
- **COMMANDER**
- 11 ROCKWELL 560F COMMANDER
- **36 ROCKWELL 680 SUPER**
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- 19 ROCKWELL 680F COMMANDER
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- COMMANDER 14 ROCKWELL 680FLP **GRAND LINER**

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Aircraft Count

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- 71 CESSNA 206
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- 26 CESSNA P210R
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Continued from page 23.

According to Oscar J. Schwenk, chairman of the board of directors, the PC-24 test program is proceeding according to plan. "The data we have so far indicate that our Swiss business jet exceeds published performance figures. I am confident that certification will be achieved in the fourth quarter, and am naturally looking forward with immense anticipation to the moment when our first customers take delivery of their PC-24," he said.

Initial deliveries of the 84 preordered aircraft will commence after certification is obtained by year-end. Outfitted with an executive interior, P03 will be available for viewing at the European Business Aviation Convention & Exhibition (EBACE) in Geneva, 22 to May 24, 2017.

The PC-24 is the first business jet worldwide to be equipped with a cargo door as standard, and can take offandlanding on short and unimproved runways. The jet is available in color themes created in partnership with Designworks, a BMW Group company.



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It Can Blow At Any Seam

There's no stopping Father Time, but next chapter of your flying career can be as a rewarding as your last. by John Loughmiller

n 1979, Tom Wolfe published his epic recounting of the life and times of military test pilots and Mercury astronauts. Wolfe's chosen title, "The Right Stuff," set the tone for his story of personal bravery, unparalleled skills and an overriding desire to "climb the pyramid," which was military pilot-speak for showing their fellow Air Force and Navy pilots the answer to the question: "Who is the best of the best?"

The book also exposed a version of Murphy's Law in the phrase uttered at one time or another by many U.S. Navy test pilots: "It can blow at any seam."

The phrase is a truism that filters down to mere mortal pilots as well. For some, the seam that blows is an accident that is an aviation career-ender compliments of the FAA or, more likely, the not-so-friendly insurance company. Or, maybe the pilot does something stupid that fractures the rules and statutes that govern the profession of flying or the military's operational orders.

The action can be a life ender, too, for an unfortunate few that cause an event where the aircraft is rolled up in a ball of aluminum with predictable consequences to the occupants.

There is one variant of the phrase however that happens to every pilot, and it can't be avoided regardless of how careful you are or how good a pilot you happen to be. The seam that will eventually open is old age.

The exact date when the seam will blow is unknown but like an oncoming storm, its approach is noted. As the years roll by, the inevitability of what's going to happen is first denied outright or put out of your mind. In the next phase, it's considered, but postponed; it's something to be reckoned with "sometime."

That "sometime" will become reality by your sixth or seventh decade depending on company policy, the insurance company, or your health.



A single-engine aircraft capable of safe flight in moderate IFR conditions can bring back the exhilaration of flight, as well as allow you to pay it forward to a new generation.

Here's how it works: Along about midway through your fifth decade, it dawns on you that pilots can't fly forever but still, the day when you have to pull the condition levers to cutoff for the final time is deemed to be far, far away. You continue to ply your vocation or avocation albeit with a nagging feeling in the back of your mind that things aren't like they were just a few years ago.

You're mindful of little things like bothersome aches and pains when you roll out of bed in the morning or maybe you find that all those years spent in noisy piston airplanes have taken a toll on your hearing. You try to ignore it but your wife or husband begins to rebel at having to constantly repeat themselves. You find yourself either cranking the com volume control 30 percent farther than you used to or simply mumbling to ATC, "Say again." It happens more and more often than was the case back when (to quote Billy Joel), "You wore a younger man's clothes."

Your visit to the AME becomes an event where the best you can hope for is to break even and get your chit signed for another year. As time parades by, the AME visits become more and more a cause for consternation as you worry that the dreaded epithet "Special Issuance" will be delivered to you by the steely-eyed M.D. that holds your fate in his or her hands.

Your short-term memory becomes a problem and reflexes slow down. Sim recurrent training involves more times when

the machine is placed in the pause mode followed by lesson repeats; more than you ever had to deal with "back in the day." These "redo" events bother you a lot, but you try to put it out of your mind.

If you fly as a vocation, you begin to worry that someone in authority will eventually call your bluff and your career will end before you're ready. If you use an airplane as a business tool, you begin to wonder how much longer you can continue to simultaneously juggle your business issues and PIC duties – a situation you successfully compartmentalized up until now.

Things begin to happen to you healthwise. Maybe, as my mom used to say, you "get the vapors" or "have a spell." For example, maybe one morning, you awaken to find the room is spinning. Something like that really gets your attention so your significant other drives you to the hospital emergency room. Several hours go by before the test results come back and you find out you didn't have a mini-stroke, but rather it's an inner ear infection. Still, you reluctantly come to the conclusion that given your age, your mission readiness rating is not going to be 100 percent for much longer. And yet, the people that pay you to fly expect you to fly. If you fly for business reasons, you have to chase business using your airplane or the bottom line is going to suffer. Events are closing in on you and your options are dwindling.

Finally comes the day when you realize you have to park the heavy iron (or your prized magic carpet business airplane). Health issues that can't be ignored or other people's opinion of your abilities bring down the curtain on your corporate flight department or business flying career. When it happens, if you love to fly, it can be devastating.

But it doesn't have to be that way. You can make a mid-course correction, meaning you can continue to fly even if you're no longer producing revenue using your aviation skills. In short, unless you're in such poor health that you simply aren't able to fly, you can return to your roots but with the added value that your experience and skills bring.

Treat yourself to either outright ownership of a personal airplane or enter into a partnership with someone you know and trust. Don't however try to recreate the halcyon days of flying the type of equipment you previously flew. Recognize that although you may be able to afford the initial cost of something like a well-used Navajo or Cessna 340, an airplane like that will eat you alive with maintenance costs.

Instead, something like a single-engine aircraft capable of safe flight in moderate IFR conditions is the ticket. (Trust me, when you are 70-plus years old, you won't want to fly in icing conditions any more so a decent airplane like a mid-time Piper Lance or Beech Bonanza will do the job nicely.)

Rent if you must but renting gets really, really old quickly. So unless you're really strapped and cannot afford an airplane of your own, don't rent.

Once you have your new (to you) means of defying gravity, give to your community some of the joy that aviation brought to you when you were flying for a career or to support a business. Some worthwhile ventures to become involved with include: EAA's Young Eagles program, the FAA's FAASTeam safety efforts or one of the many organizations that provide

free transportation to people with health problems, travel impediments or special needs.

Consider mentoring (and encouraging) young student pilots. If you have a CFI certificate, instruct part time. You won't make much money but instrument instruction is an especially gratifying instruction specialty and with your experience you're extremely qualified. An instrument student will feel as if they have won the lottery when they learn how much you can teach them beyond the basics.

Finally, you can offer to ride along gratis with recently licensed instrument pilots on days when the skies are gray. No need for hard IFR because the opportunity to teach is missing due to the stress; just go fly on the kind of cloudy day when a young pilot with only a few hundred hours will be nervous and unsure of him or herself. You might be old and not as supple as you once were, but you have something the younger crowd is lacking: real-world experience gained over decades of dealing with all sorts of situations and weather.

Keep your hand in play. When the days or professional flying are over, there's no need to cease to be a pilot who still approaches flying professionally. You'll find that it's at least as fulfilling as flying for a living – maybe more so.

John Loughmiller recently retired a second time – this time for good. His first career involved the broadcast industry, and he flew piston twins to support that business venture. His second career involved flying turboprops and piston twins as a contract corporate pilot. He's a 5,800-hour CFII/MEI and author of over 200 aviation articles plus a book on aviation weather.



Twin Proficiency by Thomas P. Turner

Pilot Belief System

Confirmation bias can lead pilots to act on their belief of what is happening, despite evidence that the opposite is occurring

ay you are solo in a very familiar aircraft, approaching a busy but familiar airport. The tower controller clears you to land on Runway 20L at Orange County/John Wayne Airport (KSNA), the shorter and narrower of the two parallel runways, and you correctly read back the landing clearance. As you near the airport, however, for whatever reason you align yourself with the equal length but even narrower Taxiway C, even though a Boeing 737 with six crew and 110 passengers aboard is stopped on Taxiway L, directly blocking what you think is your assigned runway, the flight was holding short of 20L for your landing. You see the 737 right in front of you; you even ask the tower if it's supposed to be there. Still, focused on your landing, you overfly the jetliner, reportedly 125 feet above Taxiway L according to radar data. Despite the anomalies, you continue and make what you think is a normal landing, on Taxiway C.

Or perhaps you are loading a flight plan into your FMS and type the wrong identifier. Taking off, you don't detect your mistake until you have flown far enough you're committed to land in the wrong country, on the wrong continent.

Used to departing from a familiar airport westbound, unusual weather conditions require you to take off to the east in IMC. Cleared for a SID, after departure you turn 90 degrees to the left, which is correct the way you usually depart, but this time aims you directly at a cloud-obscured mountain ridge.

Or this scenario: Cleared for the visual in night VMC, you see the runway ahead and slightly to the left. Although you have the approach programmed into your navigation system and it shows you slightly left of course, you continue to correct further to the left to line up with the runway. Touching down, you see the runway end lights racing toward you and apply maximum braking, coming to a stop with almost no runway remaining. Only then do you realize you've landed at the wrong airport, on a runway barely long enough for a short-field landing in your airplane.



In each of these real-world events, no one was hurt and there is no damage. No "accident" occurred. But clearly the pilots were not fully in command of each flight. How can this happen? How can we avoid similar situations?

Confirmation Bias

Confirmation bias is defined as "the tendency to interpret new evidence as confirmation of one's existing beliefs or theories." Our brains naturally tend to discard data that does not fit our preconceived notions, and grasp at little things that may support what we think we are seeing. Writing in *Psychology Today*, Professor Shahram Heshmat, Ph.D., notes:

"Confirmation bias occurs from the direct influence of desire on beliefs. When people would like a certain idea/concept to be true, they end up believing it to be true. They are motivated by wishful thinking. This error leads the individual to stop gathering



Figure 1: Landing on Runway 18, I have the HSI course needle pointing on runway heading. My downwind course will be in the opposite direction, 360. My current heading of about 045 degrees is correct for a 45-degree entry to the downwind.

information when the evidence gathered so far confirms the views (prejudices) one would like to be true. Once we have formed a view, we embrace information that confirms that view while ignoring, or rejecting, information that casts doubt on it. Confirmation bias suggests that we don't perceive circumstances objectively. We pick out those bits of data that make us feel good because they confirm our prejudices. Thus, we may become prisoners of our assumptions... In sum, people are prone to believe what they want to believe. Seeking to confirm our beliefs comes naturally, while it feels strong and counterintuitive to look for evidence that contradicts our beliefs. This explains why opinions survive and spread. Disconfirming instances are far more powerful in establishing truth. Disconfirmation would require look for evidence to disprove it... Look for instances to prove that you are wrong."

(Excerpted from "What Is Confirmation Bias?" *Psychology Today* April 23, 2015)

Confirmation bias may be a significant issue in aircraft accident causation, and a major threat to the successful outcome of a flight. Seeing what we *think* we'll see or hearing what we *think* we'll hear, then doing what we *think* we should do, are common hazards in aviation. One of the advantages of a two-pilot crew, with one pilot flying ("PF") and the other pilot monitoring ("PM") is a double-check of actions, indications, and operations to overcome the effects of confirmation bias. Most of us don't have this additional layer of vigilance watching what we do (or do not do) in the cockpit. We need to be our own quality control, the PM watching what we do as PF.

Getting It Right

As difficult as that may sound, there are some simple yet effective techniques we can employ to combat confirmation bias:

Develop and use standard operating procedures. SOPs include items like consistent power settings, flap settings, airspeeds and (as appropriate) landing gear position; they include how you set up and use navigation and communications radios, GPSs, autopilots and other avionics; and how and when you use checklists. SOPs may at first seem to actually contribute to the likelihood of confirmation bias, because by their nature they provide expectations. The confirmation bias-bashing benefit of SOPs, however, is that by using SOPs many decisions are already made for you; all you should do is confirm they are having the desired effect. Without having to "make it up as you go," you are free to focus your surplus mental bandwidth on detecting and overcoming anomalies that, if you were under greater workload, you might not notice.

Use checklists and cockpit flows. Although these are a category of SOPs, it's worth extra emphasis to use printed checklists and cockpit flow checks to ensure you have not





missed anything. Ironically, the busier you are the more important it is you make time for a printed checklist. When you're busy you'll be more likely to forget something, and at the same time more susceptible to confirmation bias.

Talk aloud. I talk to myself when I fly. Maybe it's a byproduct of flight instructing for so long, but I am constantly voicing things like "one-thousand-seven-hundred for three-thousand, one-thousand-three-hundred to go;" "gear down, three green, no red

[in transit light];" I've found that by speaking aloud I increase my ability to "pilot monitor" my pilot-flying actions.

Confirm navigation. I usually keep my GPS moving map display on either the 35 or 50 miles scale to have a level of detail for en route flying. I use closer scales (usually 20 miles) close to airports. But when I load my flight plan, I'll zoom out to whatever it takes to see the *entire* programmed flight. Does it make sense? Is it taking me where I plan to go? Or did I program in an

anomaly, either a typographical error on the GPS entry system or a planning error that made it into my filed route (that I'll need to fix before takeoff)? Scaling out to check, and then zooming in to the departure or en route view, would have prevented the AirAsia 223 "landing on the wrong continent" event mentioned above.

Crosscheck altitudes. Look at the arrival airport information and state aloud your planned traffic pattern or approach intercept altitude. Make sure it makes sense and you've not fallen into a confirmation bias trap. For example, I instructed the low-time pilot of a Floridabased A36 Bonanza from my home field in Wichita recently. Air work complete, descending into KICT while coupled to the autopilot, the pilot spun 1,500 feet into the altitude preselect — the airplane would descend to that height and then level off without additional pilot input. As we continued descending through about 3,000 feet I pointed at the numbers on the preselect panel and asked, "What is the significance of 1,500 feet?" The pilot responded, "I always descend to 1,500 feet before final descent into the pattern," I answered, "That might work in Florida, but the field elevation at Wichita is 1,320 feet."

Once we have formed a view,
we embrace information
that confirms that view
while ignoring, or rejecting,
information that casts doubt
on it. Confirmation bias
suggests that we don't perceive
circumstances objectively

The pilot was certain the altitude preselect was set correctly based on experience, but did not actively work to ensure that setting was *appropriate* to the current environment.

Monitor groundspeed and fuel burn. As we've discussed many times, fuel exhaustion and starvation events are way too common. Often a pilot plans enough fuel for the flight and thinks that it will be sufficient—but then doesn't lean the mixture quite as expected, or flies at a different altitude



than planned (higher means more high-power climb time; lower in turboprops and jets means vastly increase fuel flow).

Or the tailwind is less than expected/headwind more than expected, and the flight takes longer than anticipated. I listened to the pilot of a Beechcraft once who was detailing his pending lawsuit against the FAA based on getting an incorrect winds aloft forecast (by telephone). His claim was that his ground speed was too low flying down Florida's east coast, and the fuel he planned for the trip was insufficient to keep him from ditching in the Atlantic, when of course he should have simply landed for more fuel along the way. He *expected* he had the fuel to make it to destination, when monitoring the ground speed and its impact on fuel burn would have told him otherwise.

Orient yourself to runways. Most of the airplanes I fly have a Horizontal Situation Indicator (HSI), which is a combination heading indicator and GPS/VOR/ILS navigation display. These come in extremely handy for IFR work, but they also help me orient myself to runways, whether taxiing or coming in to land. If I'm not actively using it for anything else, I'll dial the HSI course needle so that the arrow points to the runway heading. This makes it very easy to determine if I'm on downwind (the tail of the needle is up, on my heading), if I'm on a 45-degree entry to the downwind (see Figure 1), or if my heading is perpendicular to the yellow course needle, meaning I'm in a base or crosswind leg. If my direction of flight does not make sense compared to the course needle when I have the runway in sight, maybe I'm lining up on the wrong runway.

Similarly, I align the course needle with the planned runway before I taxi for departure. I can tell at a glance if the runway I see I'm taxiing parallel to is the one I think it is.

Of course, there are several tricks for using geo-referenced charts and taxi diagrams that are even more precise. But just because you have something on a moving map doesn't mean you can't back it up here in your primary scan also.

Brief the arrival. Even if you're on a VFR arrival, look at the airport diagram and orient yourself to the runway you'll use. If you don't use IFR charts, or there's not a diagram available for your departure or destination airport, check it out on Google Earth or similar resources. Set up for the instrument approach even when you're making a visual approach so you'll have a navigational crosscheck. Assume nothing; resolve any discrepancies before you get too close to the ground, and don't rely solely on memory.

Monitor the Runway. On final approach, or lining up for takeoff, make a special effort to confirm the runway in front of you is the one you *think* it is. Look at the runway numbers. Confirm they match your clearance or, at nontowered airports, your intentions. Crosscheck your heading as you align with the runway. This would have saved the 49 who died, and the First Officer who survived with severe injuries, when Comair Flight 5191 attempted takeoff from the wrong runway at Lexington, Kentucky. Look for obstacles in the air around the runway and on the surface itself, including airplanes or vehicles on taxiways near runway entry points.

If anything doesn't check out, if anything just doesn't make sense or for any reason you find yourself thinking, "I have a bad feeling about this," get out of the airport environment



Confirmation bias may have been a contributing factor that resulted in one pilot landing on a taxiway instead of the intended runway at a busy airport in Santa Ana, California. This tendency may be a significant issue in aircraft accident causation, and a major threat to the successful outcome of a flight.

(abort takeoff or go around as appropriate), then figure out what's really going on.

Question Everything

In flight by reference to instruments we teach the process of **scan, interpret and aircraft control.** This process is just as descriptive of flying in visual conditions, when you consider that eyes and mind inside the airplane or out, we are constantly taking in (mostly) visual information, deciding what if anything to do with what we see, and controlling the airplane based on those decisions. Anything that interferes with the process has bearing on the results. Confirmation bias can cripple the first two stages of this three-stage exercise.

How do you mitigate the risks of confirmation bias?

- Gather information continually.
- Support or refute your expectations and decisions with real data from skeptical observations.
- Actively monitor the airplane, the environment and yourself, using an active *scan*, *interpret*, *aircraft control* technique.
- If anything doesn't look right or doesn't make sense, get away from the threat (example: go around) and reset.
- Question everything.

Employ healthy skepticism, knowing that even the best of us are susceptible to confirmation bias. As Professor Heshmat writes, "look for instances to prove that you are wrong."

Thomas P. Turner is an ATP CFII/MEI, holds a Masters Degree in Aviation Safety, and was the 2010 National FAA Safety Team Representative of the Year. Subscribe to Tom's free FLYING LESSONS Weekly e-newsletter at www.mastery-flight-training.com.

From the Flight Deck by Kevin R. Dingman



Divine Lines

Pilot commandments & engine-out SIDs

"It ain't those parts of the Bible that I can't understand that bother me, it's the parts that I do understand."

- Mark Twain

ouldn't it be nice to have a GPS course for navigating smoothly around life's obstacles? The database would contain all societal parameters, personal interaction norms and behavioral boundaries. The control panel would have an icon for our career, finances, health, relationships and our family. A "Thou Shalt Not" limiter would monitor all the pesky rules that prevent us from saying and doing whatever we want.

More than 2.2 billion folks believe that there is just such a thing. The operating manual is a book-of-books that is the most read and studied text in the history of human communication. While the course it describes may be a divine guide to our destiny, it does not promise that the ride will be safe or smooth, that it will avoid obstacles, or that it will be direct. The manual can

be cryptic, vague, circuitous and harrowing. And even with prayer, its path doesn't always lead to the destination we planned.

We don't like cryptic, vague, circuitous or harrowing when flying our airplanes. And we certainly don't want to end up somewhere other than where we planned. So, we're less theological in our deadreckoning and pilotage techniques; primarily focused on navigating to our destination rather than to our destiny. No biblical metaphors to interpret. We verify and re-verify that the points to which we are navigating are correct — a course that is safe and efficient. In the Part 121 world, we call it The Magenta Line.

However, the ability to fly a circuitous route using GPS systems can be useful. A circuitous course can be used to avoid special use airspace, undesirable winds and weather or to fly a track that is free of obstacles if we are performance limited; such as when an engine fails after V_1 . If a straight-ahead departure is not possible, we need a heavenly plan, a lifesaving path to follow. We need an EOSID (Engine Out SID).

RNOA5 RNOA6 RNOA6 RNOA6 RNOA6 RNOA6 RNOA6 RNOA6 RNOA1 RNOA1 RNOA1 RNOA1 RNOA1 RAItiesnake Peak 6862 7337

A Procedural Rabbit

An engine failure during takeoff is an emergency and therefore takes precedence over noise abatement, other traffic, SIDs, ODPs (Obstacle Departure Plan), and other normal operating considerations. This implies that you are not required to maintain the SID or ODP profile, either laterally or vertically, thus waiving some of those pesky "Thou Shalt Not's."

In the event of a deviation from the cleared routing, however, the PIC should advise ATC as soon as possible by telling them that you have an emergency and are flying an engine-out procedure, an emergency turn or an escape routing. The terms are interchangeable so don't

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get hung up on the verbiage. Unless developed by the local airport, though, ATC will not know the specifics of the procedure, but they will understand your intent and clear traffic when necessary. Even so, once airborne is not the time to wing it and pull a procedural rabbit-out-of-your-engine-failure hat.

Planning for the failure before takeoff is required. After an engine failure, high terrain, man-made obstacles, the airport elevation, aircraft performance or any combination of these factors may make it impossible to meet the climb gradient described in a SID or an ODP, whereas EOSIDs are based on specific aircraft performance in case of an engine failure. It's the responsibility of the operator to recognize this performance deficit and to develop engine-out takeoff procedures when and where required. In such cases, EOSIDs should have sufficient guidance, both to avoid obstructions and so that they can be followed in IMC and VMC.

The Nitty Gritty

Pilots departing an airport under IFR and operating under Part 121 or 135 are required by the FAR's to use an OEI procedure that assures compliance with obstacle clearance requirements.

According to Advisory Circular 120-91:

"The methods and guidelines presented in this AC are neither mandatory nor the only acceptable methods for ensuring compliance with the regulatory sections. Operators may use other methods if those methods are shown to provide the necessary level of safety and are acceptable to the FAA."

OEI procedures developed by Part 121 and 135 operators follow these guidelines and are then "accepted" by their company's FAA POI (Principal Operations Inspector). Airport and runway analysis involves complex, usually computerized computations of aircraft performance and the use of extensive obstacle databases and terrain information. Methods of complying include either using a contract company to create avoidance procedures or developing your own. Most Part 121 operators have performance engineers on staff to conduct runway analysis and produce Emergency Turn data for their company. Part 135 operators often use third-party vendors to generate the desired information. And, in some cases, EOSIDs are published by individual airports.

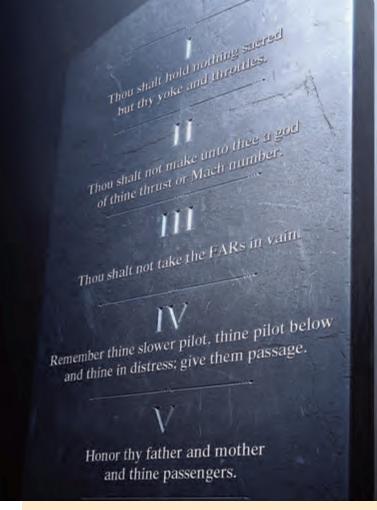
The most widely used OEI planning method compares a climb gradient published on a SID or ODP with the OEI climb gradient from the Aircraft Flight Manual (AFM); usually the second segment OEI climb gradient. The maximum allowable bank angle below 400 feet AGL is typically 15 degrees and any maneuvers should guide the aircraft around or away from terrain using this bank angle constraint.

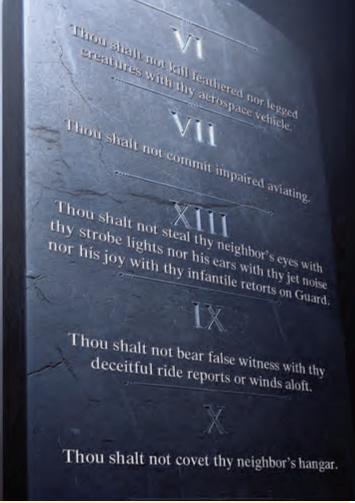
Other considerations in planning include ground based navaid and

GPS tolerances, obstacle clearance during straight takeoff and turns, wind effect during turns and loss of climb performance during turns. Any procedures must also be designed to ensure that the third segment climb (level acceleration/flap retraction) can be completed and thrust reduced to maximum continuous (MCT) before the time limit for takeoff thrust. Ultimately, the path of the EOSID should lead to a point at which the aircraft can plan a landing or continue to the destination or an alternate.



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"I have wondered at times what the Ten Commandments would have looked like if Moses had run them through the U.S. Congress."

Ronald Reagan

According to AC 120-91, Part 91 operators can develop EOSIDs on their own — no need to run them through the U.S. Congress. The engineering required to "build" the procedure on paper, however, is daunting. Since flying an actual engine-out departure is harrowing, individual operators should accomplish EOSID construction in a simulator. With an engine failure at V₁, a warm OAT and at gross weight, use the "mark" function of either the simulator itself or the avionics in the cockpit to record fixes as you develop an escape route.

The points on an EOSID can simply be a series of GPS fixes, a radial DME fix using a navaid or an altitude based fix/ turn. While most procedures do not use a ground-based navaid due to accuracy. reliability, difficulty in navigation and possible interference from the very obstructions you are trying to avoid, they will provide a plan that is better than no plan at all.

The first point on your EOSID should be straight ahead after takeoff to either a fix or an altitude. You would fly to this point while you retract the gear and get the airplane under control. The point should be far enough away to stabilize the aircraft but close enough to allow the first turn in time to avoid obstacles. Subsequent turn points should create a path that leads you to a safe holding pattern in which to climb further, or one that will guide you back to the airport. Once you have a series of fixes, you can save them as a flight plan in your FMS. Review and confirm the fixes as you would your normal route. Then, when ready for takeoff, have the EOSID standing by with immediate execution available. If the takeoff is normal, fly the ATC clearance, published SID or ODP. If an engine fails, select the EOSID, tell ATC you're an emergency and fly the divine line.

Magenta Line Metaphors

Following the proper path can be a challenge in the air and in life. Especially if our journey is fraught with obstacles, "Thou Shalt Not's" or one set of footprints in the sand. So, unless we want to reach our destiny before our destination, perhaps in a harrowing fashion, we shouldn't wing it. Instead, follow reliable guidance.

The next time you're in the sim, practice the EOSIDs you already have or develop new ones for the obstaclechallenged airports you use. It should be fun and could help you to avoid a kerfuffle. Because if you're performance limited, you won't have time to interpret a metaphor, invent an escape procedure or look up the definition of kerfuffle.

Happy Easter my friends. (TET)



Kevin Dingman has been flying for over 40 years. He's an ATP typed in the B737 and DC9 with 22,000 hours. A retired Air Force Major, he flew the F-16 then performed as an USAF Civil Air Patrol Liaison Officer. He flies volunteer missions for the Christian organization Wings of Mercy, is employed by a major airline, and owns and operates a Beechcraft Duke. Contact Kevin at Dinger10d@gmail.com





NBAA: Advocating for Business Aviation for 70 Years

by Ed Bolen NBAA President and CEO

n Feb. 13, 1947, a group of visionary business leaders and pilots united to encourage safety and professionalism

throughout their nascent industry, and to protect access to airports and airspace. This initial meeting of aviation professionals resulted in the organization that ultimately became the National Business Aviation Association (NBAA).

Even 70 years ago, possible airline domination of the nation's air traffic control (ATC) system was a significant concern throughout the industry. In the 1950s, when the FAA was recasting the ATC system to deal with growing air traffic and the introduction of jets, NBAA was among the organizations that helped identify aviation's future needs for services and facilities, especially for non-airline users.

During the 1970s, when business aviation faced the challenge of dealing with fuel shortages and the threat of onerous aircraft-noise regulations, NBAA helped prevent the Environmental Protection Agency from obtaining authority to regulate aircraft noise and convinced government officials that fuel allocations for non-commercial flying should not be drastically cut.

During the 1981 air traffic controllers' strike and after the 9/11 terrorist attacks, NBAA worked with government officials to help keep business aircraft moving safely and securely. And throughout its entire history, NBAA has fought operating restrictions, such as aircraft bans, airport curfews and discriminatory airport fees.

Of course, promoting and protecting the interests of business aviation remains a core mission of the association today, and NBAA has many initiatives designed to advance and safeguard the industry's interests. Included among them is the No Plane No Gain campaign, an initiative jointly sponsored by NBAA and the General Aviation Manufacturers Association, which continues to promote the understanding and acceptance of business aviation.

Legislative and regulatory advocacy are also key aspects of this mission, and this takes several forms. Besides providing expert technical and policy testimony before regulatory agencies and Congress, NBAA is building industry support among federal lawmakers via the general aviation caucuses in the U.S. House and Senate. NBAA also has made it easy for individuals to provide input to federal legislators via the association's online Contact Congress resource.

Similarly, NBAA advocates for the industry on the state and regional levels, as well as joining with its sister organizations worldwide to advocate for business aviation before global regulatory bodies.

Throughout its long history, NBAA has worked to support policies that foster business aviation, including modernization of the nation's aviation system, building upon the already outstanding safety record for business aviation, and preserving secure access to airports and airspace. This mission will continue for the next 70 years, and beyond.

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NBAA Continuing Fight to Preserve SMO Following Unprecedented Settlement Agreement

ike many throughout the general aviation (GA) community, NBAA was surprised by a recent, unprecedented settlement agreement between the Federal Aviation Administration (FAA) and the City of Santa Monica, CA, concerning the future of Santa Monica Municipal Airport, in which the agency seemingly acquiesced to a vocal minority of airport opponents.

The settlement, announced Jan. 28, provides continued access for GA users of the airport, including business aviation, until Dec. 31, 2028. It also requires that the city comply with its federal obligations, including the provision of long-term leases to operators and tenants.

That said, the agreement also allows the city to begin the process of reducing the length of the airport's sole runway from 4,973 feet to 3,500 feet, limiting the airport's suitability for turbine aircraft operations.

NBAA President and CEO Ed Bolen termed the settlement agreement "a one-of-a-kind development" that would severely restrict aviation access throughout Southern California and across the U.S.

"Santa Monica's airport is a vital asset to our aviation system, both locally as well as nationally, and serves as a critical transportation lifeline for the entire Los Angeles basin," Bolen added. "NBAA remains committed to aggressively supporting unrestricted business aviation access to SMO, through this petition and other available channels."

City officials have repeatedly attempted to curtail access by aviation users and other stakeholders to

SMO, in defiance of established historical precedents dating back to the original 1948 instrument of transfer agreement that returned control of the former military airfield back to the city, as well as the city's federal grant obligations.

Following a detailed review of the settlement agreement, in February, NBAA joined with five other aviation stakeholders at SMO to petition the U.S. Court of Appeals, District of Columbia Circuit to review the terms of the agreement between the FAA and the city.

NBAA and other stakeholders are also continuing to review all additional options, including pursuit of several ongoing administrative complaints – not covered under the settlement – by NBAA and others over the city's federally mandated obligations. This includes a Part 16 complaint, filed by NBAA and other airport proponents, alleging that the city has mishandled airport finances, landing fees and other terms, in part through continued failure to offer leases to longstanding aviation-related businesses on the field.

"We are disappointed that the government decided to settle this case, especially given that NBAA has long been committed to aggressively supporting business aviation access to SMO, through every legislative and legal channel available," Bolen concluded. "If there are further avenues available to us, we intend to explore them.







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Good Neighbors, Good Outcomes: Supporting Your Airport

(An extended version of following article appeared in the Jan/Feb. 2017 issue of NBAA's Member publication, Business Aviation Insider. To read the complete article and more, download the BAI app at www.nbaa.org/news/insider/.)

t stands to reason that flight departments that have a cooperative relationship with the airports at which they are based, or fly into frequently, benefit from the relationship, as do the airports and surrounding communities themselves.

"Flight departments that step up to help provide financial or other assistance to upgrade infrastructure and enhance safety at their airport are not the only ones benefitting," said Alex Gertsen, NBAA's director of airports and ground infrastructure. "The surrounding community and the airport operator also reap advantages, including improved safety and accessibility, increased operations, more based businesses, and potential for additional revenue."

A case in point is Pullman-Moscow Regional Airport (PUW), located in eastern Washington near the Idaho border. The airport, which opened in 1940, is not easy to spot among the rolling hills of the Palouse region, and the runway length of 6,700 feet and width of 100 feet is not adequate for some aircraft operators that would otherwise like to access PUW, including the airlines.

"Everything about the airport has been designed for older aircraft," said airport executive director Tony Bean, noting that the airfield has been operating under an FAA waiver for some time. "We lose a lot of charter business because of the airport's limitations."

Enter Schweitzer Engineering Laboratories (SEL), a 4,500-employee-owned company with its headquarters in Pullman. "We couldn't be in the Pullman-Moscow region without business aviation," said company founder Dr. Ed Schweitzer. "When we close the airplane door we are less than four hours

from anywhere we need to go, including Mexico City, Dulles International Airport – wherever."

Four SEL company aircraft based at PUW fly hundreds of employees yearly to multiple locations; SEL employees also fly on 500 commercial flights per year from the airport. But because of the airport's limitations, especially during the winter months, SEL stepped up immediately when plans were announced to upgrade the airport, including extending the runway by 600 feet, widening the runway and taxiways, and improving lighting.

Although federal grants are funding more than 90 percent of the project, local funding had to be raised as well. "Because business aviation is so important to PUW, my wife and I put \$1 million into the project, and SEL matched with an additional \$1 million," said Schweitzer. "This is our community. As a major user of the airport, we are excited to be a part of the project."

The flight department of The Wonderful Company also understands that being a good neighbor to airports and their surrounding communities means following the rules. Although based at Bakersfield Airport (BFL), Wonderful aircraft regularly fly into Southern California airports such as Van Nuys (VNY), Burbank (BUR) and Santa Monica (SMO).

With the company being headquartered in Los Angeles and less than five miles from embattled SMO, Wonderful aircraft fly into that airport several times daily to pick up employees."

It is our job as an operator to understand what the issues are wherever we fly and to adhere to any pertinent rules, including noise abatement and others," said Don Hitch, vice president of flight operations at Wonderful. "We are considered a good neighbor because we respect the airports we utilize."

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New, More Accurate Convective Forecast Product Now Available

he National Weather Service (NWS) recently announced implementation of a new convective weather product - the Traffic Flow Management Convective Forecast (TCF) - which will allow for a more accurate representation of forecasted convective weather. The TCF will have a look and feel similar to the CDM Convective Forecast Product (CCFP), which it is replacing.

"This new product will provide operators with more accurate and timely forecasts," said John Kosak, NBAA Air Traffic Services specialist and staff liaison for the NBAA Weather Subcommittee. "Because this is a return to a human-in-the-loop convective product, the users will collaborate on the final product, which will allow a more accurate representation of the forecast convective weather."

With the new TCF, meteorologists will be able to determine the accuracy of that forecast and add any areas to the final product as high confidence if necessary. Additionally, they can trim areas of excess high confidence.

"With the meteorologist in the loop, we once again have the capability of drawing lines, in addition to the sparse and medium levels of coverage depicting the areas of thunderstorms," Kosak said. "This is another big change from the automated CCFP that showed only an area of medium coverage, which was basically anything over 40 percent coverage. It would be up to the user to guess if or where lines might form within that area.

The FAA's Collaborative Decision Making Weather Evaluation Team (WET) has been working on a better convective forecast product, with the intent of increasing collaborative participation by users, added Kosak.

The team first working on automating the CCFP, which freed up forecasters to work on the new Collaborative Aviation Weather Statement (CAWS). The idea was that the CAWS would allow collaboration at any time, beyond the limited scope of the automated CCFP. Unfortunately, in 2015 and 1016, when CAWS was used, it was determined that it was "neither effective or ineffective in supporting strategic planning and traffic flow management decision making during convective weather," Kosak said.

Going forward the WET decided to return to a scheduled product in response to a criticism of the CAWS that required the users to monitor the chat rooms for potential issues 24 hours a day. By returning to a scheduled product, users are able to staff for the specific collaboration times and air traffic managers are guaranteed a product at specific times of the day to use in planning initiatives.

The TCF will initially be a collaborative product from March through October, with plans to eventually collaborate throughout the entire year. View it at www.aviationweather.gov/tcf.



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New NBAA Safety Initiative Focuses on Loss of Control Prevention

he NBAA Safety Committee recently launched a new program featuring loss of control inflight (LOC-I) prevention resources for pilots of all experience levels. The first in a series of planned LOC-I awareness efforts, NBAA's new resource page includes tools such as informational videos, a visual guide to key LOC-I topics and an extensive, frequently updated list of available online training, regulatory and scholarly resources centers.

LOC-I refers to accidents in which flight crews are unable to maintain control of an aircraft in flight, resulting in an extreme deviation from the intended flight path. Between 2001 and 2011, more than 40 percent of fixed-wing general aviation fatal accidents occurred because pilots lost control of their aircraft.

"Loss of control inflight is by far the largest cause of fatal incidents in business aviation," said Paul Ransbury, lead of the Safety Committee's LOC-I Working Group and president of Aviation Performance Solutions. "To combat this threat to our industry, the Safety Committee has taken steps to gather, align and develop resources to provide NBAA's membership

with comprehensive guidance to help reduce the risk of LOC-I."

Content includes insights on the statistical threat of LOC-I, key definitions of related concepts such as an "airplane upset" and modern industry strategies structured to prevent the hazards of loss of control inflight. As a complement to this foundational information, the Safety Committee has gathered detailed resources ranging from regulatory documents to a list of Upset Prevention and Recovery Training providers across the country.

"As an NBAA Top Safety Focus Area and the deadliest threat faced by pilots around the world, the Safety Committee's establishment of a specialized LOC-I Working Group is directly aligned with our core purpose and vision," said David Ryan, chairman of the Safety Committee. "In addition to the current tools and resources, we are embracing the global aviation industry's LOC-I best practices and presenting them in a turnkey, easy-to-find format."

The new resources may be viewed at www.nbaa.org/ops/safety/in-flight-safety/loss-of-control-in-flight/.







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En Route

Textron Aviation Technical Publications Now on New On-line Platform

extron Aviation has launched a new online platform for its Beechcraft, Cessna and Hawker technical publications. Called 1View, the portal provides customers access to all maintenance manuals, flight documents and service information for their aircraft.

Designed with accessibility and easy to use in mind, the all-in-one system combines the functionality of the Cesview and Interactive Maintenance Libraries (IML). The 1View platform includes features such as single sign-on, the ability to add annotations, e-commerce integration to generate part order lists, enhanced search, history tracking and bookmarking.

"We have already introduced the platform to several customers and their feedback has been extremely positive. We continue to explore solutions to make support more accessible to our customers, and 1View is the latest example of that mission," said Kriya Shortt, senior vice president, Customer Service.

MODAERO Aims to Attract Millennials to Aviation Event

his year's MODAERO Festival and Air Show will be bigger and better than ever. The event will take place June 2-4, 2017 at the Conroe-North Houston Regional Airport (KCXO).

The event began in 2016 as a national fly-in targeting the growing millennial demographic which, according to FAA records, accounts for more than 48 percent of all certificated pilots and 78 percent of student pilots. Last year's event featured aviation exhibits and a career fair with more than 60 exhibitors including Cirrus Aircraft, Jeppesen and ExpressJet Airlines. For 2017, the event is adding a full air show that will include military jet team demonstrations, world-class civilian aerobatic demonstrations, classic military aircraft and hands-on ground displays.

"We are excited to take the next step in the evolution of our flagship event," said Brian Columbus, festival founder and organizing entity MODAERO Aviation Community, a 501(c)(3) charitable organization. "We were overwhelmed by the enthusiasm for our startup event last year and see great potential for a world-class air show in the North Houston area."

The MODEAERO organization uses this annual event to raise funds for year-round aviation outreach efforts. "We have developed a number of initiatives for 2017 to raise awareness of general aviation, encourage STEM education and grow the #NextGen community of Aerospace in Texas and throughout the country. We are also looking for collaborative partners in pursuing a similar mission," added Columbus.

MODAERO Festival and Air Show will offer a variety of ticket packages for every budget. Tickets will be available online beginning Feb. 24. Sponsorship and exhibitor opportunities are available now at www.ModaeroFestival.com.

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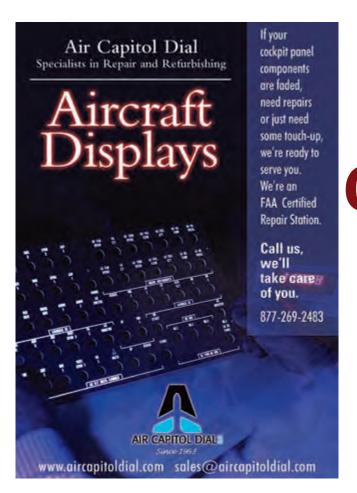


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En Route

Get a Free Lynx NGT-9000 ADS-B Transponder With a New S-TEC 2100 Digital Flight Control System Purchase

enesys has a new promotion to encourage aircraft owners to upgrade to meet the ADS-B mandate. Those who purchase a new S-TEC 2100 Digital Flight Control System between now and June 30, 2017, will also receive a free Lynx NGT-9000 touch screen 1090ES/ADS-B transponder.

Genesys Aerosystems Director of Sales and Marketing Jamie Luster said, "There is nothing more exciting for an aircraft owner than the word "free" because flying is not an inexpensive pastime. Aircraft owners immediately realize this is a great deal for a new digital autopilot and a 1090ES/ADS-B transponder.

"Our 2100 is the most popular digital flight control system upgrade for high-performance twins and turboprops," Luster continued. "We felt that with the FAA's ADS-B mandate on the horizon, this would be an unbeatable incentive for operators to get the best possible autopilot and ADS-B solutions at the lowest possible cost."

The ADS-B transponder offer ends June 30, 2017. For complete details, visit: www.genesys-aerosystems.com/promotions.



En Route

Upcoming Events

April 22-23

Gulf Coast Salute featuring the Thunderbirds Tyndall Air Force Base, FL

May 6-9

Ft. Lauderdale Air Show featuring the Canadian Snowbirds Ft. Lauderdale, FL

June 2-4

MODAERO
Conroe-North Houston
Regional Airport (KCXO)
Houston, TX

Aug. 9-11

Canadian Business
Aviation Association
CBAA 2017
Abbotsford International
Airport (YXX)

May 13-20

www.cbaa.ca

Joe Nall Week Triple Tree Aerodrome Woodruff, SC

July 24-30

EAA Airventure Oshkosh Oshkosh, WI

Oct. 7-15

Albuquerque International Balloon Fiesta Albuquerque, NM

Oct. 10-12

NBAA-BACE 2017 Las Vegas, NV

Oct. 28-29

Fort Worth Alliance Air Show
Fort Worth, TX

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On Final by David Miller

Learning to Fly Again

Single engine airplanes can be dangerous. They have tiny engines that fail for no good reason. Their electrical systems fry themselves leaving no backup power. Pilots fly them into buildings, mountains, and TV towers seemingly every day.

Patty and I are traveling to Australia and renting a Cessna 182 to fly around the country.

What the hell am I thinking?

These and other thoughts raced through my mind when I agreed to Citation owner and friend Kirk Samuelson's idea to take a flying adventure halfway around the world. It was crazy but somehow intriguing. Forget the fact that I had never flown a Cessna 182, and hadn't flown any single-engine airplane as PIC in over 40 years.

But I was hooked.

For the past 30 years, all my piloting has been in jets. Flying jets in the IFR environment spoils you. Controllers lead you just about every step of the way. Learn the rules, and you can get from point A to B easily. There are just lots of rules. Ask a new private pilot what he or she thinks about us jet jocks and they are usually in awe. It's really the other way around.

I was going to have to learn how to fly all over again.

I found a local flight school with a fleet of 172's and a 182, all Garmin G1000 equipped. Their chief pilot was 10 years younger than my son. He assigned me to instructor Jeff Wallach and said I would enjoy him because he was "close to my age." It turns out that Jeff had completed a successful business career and just wanted to fly little airplanes and teach. For the past six years, he has done just that, flying clockwise and counter clockwise around the pattern. He made it look simple.

It is not simple.

Little airplanes don't just go where you point them. You actually have to fly them there. I am not certain, but I think it has something to do with the wind. Jeff said so, too. Over and over and over again. They also have what is called a "rudder." I had to re-learn what the rudder does. In a jet, I use the rudder about twice a year during the engine-out part of my 61.58 check ride. In the 182, the rudder is your best friend or worst enemy. And although little airplanes have autopilots just as capable as in the jets I fly, you don't use them much in the pattern. I also found out that in a strong crosswind, controlling a 182 is more like flying a kite.

Most of my kites wound up in trees.

"Dave, as you reduce power over the threshold, look down the runway and continue that backpressure," said Jeff.

"Where down the runway?" I quizzed.

BANG! We landed hard on the nose. "Let's try that again," Jeff suggested. And over and over we did. Steep turns. Short approaches. Emergency landings. Slow flight at 60 knots.

"Won't we just die at 60 knots?" I yelled.

"It's OK Dave, scores of men have flown at 60 knots before you and lived to tell about it," Jeff assured. Many lessons ensued with slight improvement.

After every flight, I walked through the FBO and watched all the teenage pilots talk about me and my lack of skills. "Go ahead and laugh," I mused. "I was going to buy you kids a case of beer."

But not now.

Fly safe.

With 6,000-plus hours in his logbook, David Miller has been flying for business and pleasure for more than 40 years. Having owned and flown a variety of aircraft types, from turboprops to midsize jets, Patty and David currently fly a Citation M2. You can contact David at davidmiller1@sbcglobal.net.

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