

THE MAFC NEWS FOR DECEMBER 2019

Editorial Staff: Charles Burke,
Dave Pathe, Karen Barbagelata

MONMOUTH AREA FLYING CLUB

Club Meetings

Board Of Trustees:
7:00 PM 12/5/2019
Club House

General Meeting:
9:00 AM 12/21/2019
CAP Building



ATC Tower Simulator at Hughes Technical Center, KACY by Dave Pathe

As some of you know, the FAA has been asking pilots to test various Weather-in-the-Cockpit (WITC) products at the Hughes Technical Center located on the grounds of the Atlantic City airport. The testing involves a brief quiz on weather, a pre-flight briefing and a flight in their simulators using the WITC product, usually an iPad with graphical map and weather displays. About 48 pilots went through the recent testing, ranging in ages from 20 to 90 years of age in groups representing USA pilot demographics. I participated in the most recent program this September and it is a great experience which is both fun and challenging. Did I mention you get compensated for your time? Yes, it felt like I was getting some of my hard-earned tax dollars back!

I'll write another article on this but wanted to tell you about the ATC Tower simulator I saw during my visit. My first impression upon seeing it? *Overwhelmingly impressive...* and I have seen many simulators used for training in the aviation, train, power generation, oil and refining industries. These kinds of simulators are in a whole different league, so here's the story.

After the WITC Sim session, Kim Mortensen (the program coordinator) took another pilot and me to the Airport Facilities Terminal Integration Laboratory (AFTIL) where the tower simulator was staged and running the Kansas City International (KMCI) airport tower cab. This airport currently has 3 circular terminals but is being reconfigured with 2 circular and a new "H" shaped terminal (see diagrams below). The purpose of the simulator was to evaluate the operability of this new configuration which included new gates, taxiways, a deicing pad and other associated facilities. How would this design work under different weather and traffic scenarios or when different problems occurred such as planes returning to the gate or disabled aircraft? These questions were answered using this Sim.

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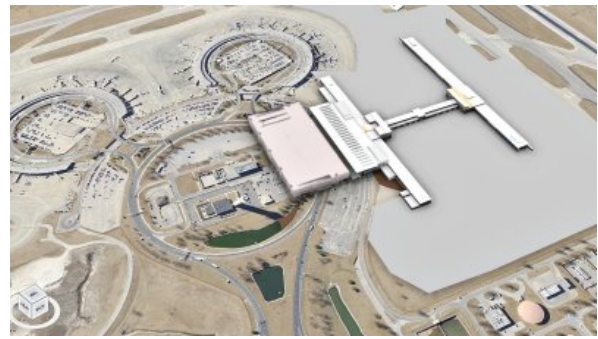
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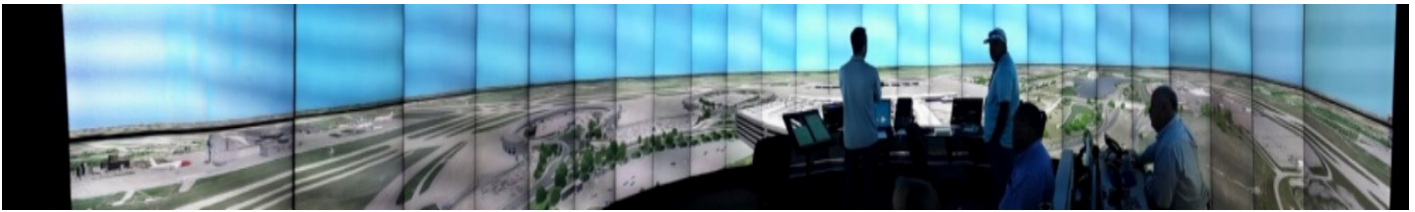
and more!



Kansas City's current circular 3 terminal configuration (l) and the new "H" terminal being planned and tested (r)

This tower simulator system is physically large, has a lot of equipment, requires about 20 people to run (including controllers), and is staged in 4 different rooms as described below.

ATC Tower, where the controllers see the same airport view as in real-life and give instructions to pilots. This room is setup exactly the same as the actual control tower and has about 300 degrees of viewing using about 52 large high-res monitors, stacked in pairs from floor to ceiling. Communication with pilots, in a different room, is by radio same as in the tower. The panorama photo below doesn't do justice to the detail shown on the displays, where we saw planes taxiing, landing and departing. The whole thing was amazingly realistic.



Pilots Room, where 8 ‘pilots’ manipulate their aircraft, usually in accordance with controller instructions. These pilots are not actually “flying” the planes, just positioning aircraft. Most of their actions involve taxiing and moving from point to point on the tarmac so the new taxiways, gate locations and access to runways can be observed and evaluated. Each pilot is controlling multiple aircraft. Part of the assessment includes identifying potential bottlenecks on the tarmac and solving problems such as when a plane has a flat tire or has to return to the gate. Pilots may also be told to make wrong turns or initiate go-arounds for real-world realism (i.e. pilot errors).

Simulator Control Room, where 2 people start, stop and run the system, introduce traffic scenarios and workloads, change weather conditions (visibility, rain, snow, etc.), and initiate “problems” for the controllers to resolve. This room looks similar to the ATC Tower room but is smaller, has fewer visual screens (about 20), and a narrower display viewing range of about 180 degrees. This setup also has several specialized displays to allow observation of aircraft (top down views) and evaluation of the various scenarios being tested. The data for each scenario is saved and can be recalled for playback and evaluation.



Computer Room, which runs the whole system and has many high-performance PC’s and servers driving the visual displays (no photo for this as it is just a large closet full of cables and computers).

Kim told us that the day before our visit, testing of the new terminal was being performed in snowy conditions with reduced visibility and aircraft using the deicing pad. I’m sorry to have missed that interesting scenario, which was just one out of 11 that were evaluated. He also told us that they do about 3 or 4 different tower simulations and evaluated each year. The next one in its early stages of development is for Nashville International airport in TN. I have no idea what a simulator and evaluation like this costs but from my own career in oil and refinery simulation, the payback in design verification and avoiding errors is probably far more than the cost, not to mention training of controllers in the new airport configuration.



If any MAFC pilots would like to participate in the WITC program, Kim would like to hear from you. The next session is going to be in March, and they are looking for both VFR and instrument rated pilots of all ages. I can give you contact information if interested. In the meantime, Fly Safe!

Test: What are the basic VFR weather minimums according to the FAR’s? Define MVFR.



Spotlight on: Patrick Milando



I’ve always been a fan of aviation but it wasn’t until my children were established and out of college did I take it up more seriously. In fact, though I had a few lessons in 2013, 2018 is when I went all in. My first real start in flight school started at Old Bridge in NJ and from there I followed my instructor to Ocean Aire at MJX. All this was in 2018 and after I pass my check ride with Greg Hill in June of this year, I decided I was going to do an accelerated IFR course to become a more complete pilot. So just last month, I took off for Long Beach California and spent intensive 7 days flying 5 and 6 hours a day to get this rating. It was the most intense week of flying.

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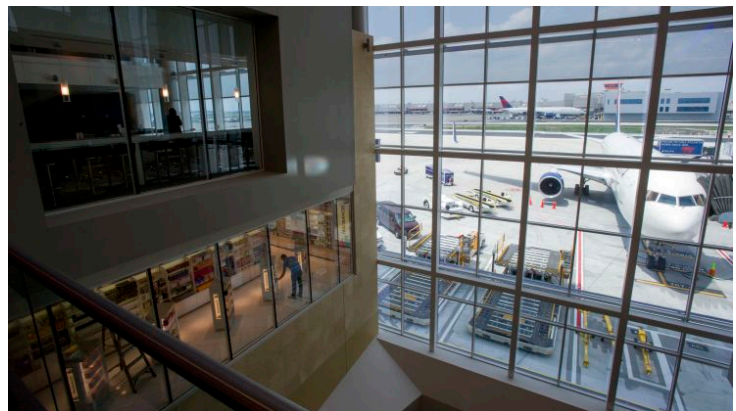
This afforded an opportunity to not only learn IFR maneuvers but the G1000 and flying from a Delta airport as well. It was like drinking from a fire hose. Ultimately I'm glad I did it because I feel I'm a much better pilot. It also has given me a reason to obtain a Commercial rating, and perhaps a Seaplane rating as well. I say Seaplane because, last September I was in Italy for about three weeks and had the and had an opportunity to fly a ASES C172 in Lake Como. A great experience! Also while I was in Italy I flew an Ultra-light aircraft on a grass field. My instructors for both planes were ex Italian Air force pilots. I joined MAFC on 9/21 and today 9/30/19 was my first flight with Tom Flieger. To date I have about 180 hrs, working towards 250 for the Commercial rating.

I'm a classically trained French Horn player, I have performed in all the big venues in NYC and in most of the main concert halls in Europe, Asia and South America. Recording in NYC has brought me 2 Participation Grammys with the New York Philharmonic and the Metropolitan Orchestra. You've probably also heard me on background soundtracks on the big, little and computer screens. These days, I enjoy playing Principal Horn at the Lion King on Broadway, but sneaking out also to play concerts at Carnegie and elsewhere.

My two adult children are really wonderful and we have a great time together. My son is a PhD in Boston and my daughter is in her 3rd year medical school at GW in D.C.

Aviation Trivia: What are the 6 most efficient airports?: submitted by Tom Flieger:

- 6, Jeju International Airport (CJU) South Korea
- 5 Athens International Airport (ATH)
- 4 Kahului Airport (OGG) Hawaii
- 3. Vancouver International Airport (YVR)
- 2. Minneapolis–St. Paul International Airport (MSP)
- 1. Hartsfield-Jackson Atlanta International Airport (ATL)



Hartsfield-Jackson Atlanta International Airport

Rules & Regulations-(Update Part #5)

11. Membership

FROM:

10. The Club has a web site at <http://www.flymafc.com>. The public area includes information for prospective members, application forms, Rules & Regulations and links to other aviation-related sites. The private area contains a listing of Club members (with phone numbers and e-mail addresses) and a listing of Club officers. For access to the private area, ask a member for the web userid & password.

TO:

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Another View by Mike Bernicker & Charles Burke

The fall season brings with it many positive attributes especially for those who fly. The cooler temperatures eliminates an over-heated cockpit making any trip, especially longer journeys, much more comfortable. This fact also sets the stage so that when the curtain rises on the landscape that comes into view, it will be appreciated that much more.



In late October, it was decided, after a series of delays caused by less than ideal WX conditions, to fly northwest and stop at Blairstown Airport (1N7) for brunch. Nestled just a stones throw from the Delaware Water Gap, the 66 nm journey offered a two-for-one experience.

After lifting off from N12, the first thing that was noticed was the total absence of any turbulence. It was as if we were skating on ice. N268BG quickly settled into a direct course and almost flew itself in the ultra calm air. This not only generated a comfortable environment but provide additional time to take in the multicolor view of the landscape below. Swaths of reds, oranges green and yellows covered the ground for as far as you could see in this

Continued

in this crystal clear air. The only thing missing were the fascinating pumpkin patches that the pre-Halloween season sometimes offers.

As we sailed nearer to 1N7, the beautiful Delaware Water Gap appeared just beyond the airport and was also straight ahead. The decision was quickly made to break off our descent and have a closer look at this amazing natural formation. As we approached the first ridge, you could see the fragments of rocks and boulders that hung precariously along the slopes as well as the different bands of rock colors that formed an index spanning millions of years in geological history.



After passing over the ridge, we began to circle back and prepare to land but there, nestled in a valley just to the east, was a huge fog bank that hovered over the ground like a white plum of cotton sitting motionless between the sloping walls on each side. It was almost surreal when contrasted against the clear air that was otherwise void of any visual obstructions for as far as the eye could see.

It was then that we realized we were looking at something much deeper than simply a beautiful landscape. That which might initially appear to be a static setting, is really a living entity that is moving through space and time at speeds encompassing the ultra fast to the ultra slow. While we were traversing the sky at times hitting an airspeed of 150 MPH, the rocks were also in motion. The boulders were slowly being worn away eventually to form silt that would be carried to the ocean leaving behind

a minor scar where the mountain ridge once existed. The vegetation added a midpoint to the time line with the cycles of each season offering a wide range of textures and colors.

Once the wheels were on the ground, and breakfast had been ordered, the impact of what we had seen opened up an interesting topic of conversation. It also brought into focus the fact that we are so fortunate to be able to see a world from a total unique perspective that is obscured to those who are tethered to the ground.

WINTER (and every other season) FLIGHT CURRENCIES by Tom Griffin

As days get shorter and temperatures get colder, we tend to fly less. Loss of currency can catch up when we're not flying so often. So this might be a good time to review our FAA and MAFC currency requirements. As we know, FAA currencies are outlined in FAR 61.57 and are pretty basic; but we also have to comply with somewhat more stringent Club standards that are listed in the MAFC Rules and Regulations, Section 6, Paragraphs 2 through 6.

BASIC FLIGHT:

FAA: May not fly as PIC WITH PASSENGERS unless you have made three takeoffs and landings in the last 90 days.

MAFC: May not fly as PIC WITH OR WITHOUT PASSENGERS unless you have made three takeoffs and landings and logged one hour flight time in the last 90 days in that type aircraft (or type of Club aircraft of higher complexity). Flight with a Club CFI is required to regain currency.

NIGHT FLIGHT:

FAA and MAFC: May not fly as PIC with passengers between Sunset +1hr and Sunrise -1 hr unless you have made three takeoffs and three full stop landings between the same times in an aircraft of the same category and class (Airplane, Single Engine) in the last 90 days.

NOTE: To fly as PIC in a MAFC at night you must have had a night checkout in that type and model.

INSTRUMENT FLIGHT:

FAA and MAFC: Six instrument approaches, holding and course interception. (Remember, in order to safely fly and log instrument flight in VMC, whether or not on an IFR flight plan, you must be accompanied by a qualified safety observer – licensed pilot with current medical certificate.)

FLIGHT REVIEW:

FAA: May not fly as PIC unless you have completed a FAA Flight Review within the previous 24 months (end of month applies).

MAFC: May not fly as PIC unless you have completed a MAFC Flight Review (“Six Month Checkride”) within the previous 6 months (end of month applies). “At least once a year, this flight review must be accomplished in the most complex aircraft for which you wish to retain MAFC pilot privileges, or an airplane of comparable or greater complexity.” [MAFC R&R]

ARROW FLYERS have an extra requirement. In addition to three landings within 90 days, an Arrow pilot must have logged three hours within the previous 180 days.

N61 WT: Pilots flying our “Glass Cockpit” aircraft need to get their MAFC Flight Review in WT at least once a year.

That’s currencies in a nutshell. Best way to stay current, comply with regs and be safe – FLY A LOT!



Maintenance Report by Dan Coles

N66977-C152 Metrix AV, a company that maintained the light sport planes for Jim Hamilton, looked the problem we are having with the intercom. They were unable to find the problem and proposed a new audio panel as the fix. We have a price of \$1849.70 from Dean Upholstery for recovering the seats and replacing the carpet.

N67818 C152 The work on this aircraft has been completed at BP Air.

The aircraft was taken to Three Crown Avionics for installation the ADS B transponder. Carl said he should have it finished in 2 weeks. We have installed a GTX 335 transponder and GAE12 encoder. The pilot dropping off the aircraft reported radio issues with the #1 radio during the flight to Sussex. Carl checked both of the radios on the ground and found them to be working normally.

N4287Q-C172-L This aircraft was at VAY where they found the carburetor was leaking air causing the high cylinder temperatures. The carburetor was replaced and the aircraft was test flown. The temperatures were normal during the flight and the aircraft was returned to service.

N93KK C172 M This aircraft was taken to Ocean Aire for the 24 month pitot static check and transponder certification. The seat rail A.D. was taken care of while there. They also repaired the carburetor air box that was about to fall off. They replaced the brake linings and replaced both push to talk switches.

N268BG-PA28-181 A pilot had a tire go flat while taxiing at an airport in South Carolina. The tire was replaced at that airport. This aircraft was taken to Ocean Aire for an oil change and 50 hour service.

N55804-PA28-28 I received a squawk that the electric trim was not working and the manual was very stiff. The aircraft was taken to Ocean Aire they got the electric to work with some assistance on the manual trim wheel. It needs to have the servo replaced. This part is no longer available from Piper. Tom Rae at Ocean Aire is looking into other options for replacing these parts. The reported “left brake pads low and missing 2 screws from inspection cover on same wing” were taken care of at the recent oil change and 50 hour service that was done at Ocean Aire.

N61WT A pilot reported the oil pressure was fluctuating in flight. The aircraft was taken to Ocean Aire to have the issue addressed. They found that the oil pressure transducer is failing and ordered a new one. On their initial walk around they discovered a large chunk taken out of the propeller. The piece of metal missing has rendered the propeller unusable and will have to be replaced.

After further examination of the aircraft it was determined this damage was caused by a prop strike requiring the engine to be removed and disassembled for inspection. Because of the amount of hours on the engine the board of trustees decided to have the engine overhauled. The overhaul will be done at Signature engines in Ohio.



ELECTIONS!! Club elections will be held at the January, 2019 General Membership meeting. If you are interested in running as a candidate, there is a signup sheet posted in the trailer. You must be a member in good standing (dues paid up, etc.) to run for office or vote for nominees.



Answers to the test: For VFR in class G airspace at or below 1200 feet, it is 1 mile and clear of clouds . From 1200 to 10,000 it is 1 miles visibility, 500 ft. below, 1000 ft above and 2000 ft laterally. Flying in class E or at night it is 3 miles visibility, 500 ft. below, 1000 ft above and 2000 ft laterally.

MVFR= Minimum VFR flight rules and classified by the class of airspace, the altitude, distance from clouds, visibility and if flying in the day or night.

Vanishing aircraft keys! by Charles Burke

When flying, do you ever put the aircraft key down and then can't find them? Here is a super simple solution.. pick up a neck strap with a hook on the end. You can often get them for free or for \$1 in a super discount store. Just clip the keys to the hook and put the strap around your neck. It is guaranteed that you will have no problem finding the keys after doing this.



The Ultimate RED BUTTON: submitted by Art Templeton

Cirrus now offers the answer to what should a passenger do if the pilot becomes incapacitated in mid flight. <https://cirrusaircraft.com/cirrus-aircraft-revolutionizes-passenger-safety-through-autonomous-flight-with-safe-return-emergency-autoland/>



Reminder—The monthly dues will be \$40 as of January 1, 2020

Brett Paulus passed his commercial.



Janis Blackburn participated in a Girl Scout event with the NY/NJ 99s. She did a 3 hour session with 32 girls. They learned about some famous women pilots, wx measurements, sectional reading, how an airplane flies, and weight and balance.



MAFC HISORY! A new committee has been created to gather information on the history of the club and then assemble it into a package for the members to reference. When the work is completed, an article will appear in the newsletter detailing what is available

Takeoffs are optional but landings are mandatory

