



DAC - MDC - Boeing Retirees
of California

HEADQUARTERS: P.O. BOX 3271, Seal Beach, CA 90740

Roundup

Ron Beeler- Editor (562) 296-8958

Newsletter No. 208

www.macdacwestretirees.org

May 2023

Bill's Corner

It seems we have spent a lot of time lately dealing with problems, but I think we are emerging from that phase and can think more about positive things now. We addressed our financial issues and have a plan to keep the Association going. We had a great March luncheon – great crowd and speaker. And it didn't hurt that our speaker made a generous donation to the Association! Attendance is still down from the pre-COVID days, and we are still waiting to see if it recovers fully; with your efforts to encourage retirees to join and attend, we should achieve that.

Boeing Commercial is making progress on its plans to recover from a series of certification and production issues, but it seems that for every few steps forward, there is a step back. The latest is another supplier problem – the Wichita company making 737 fuselages apparently built some with what they called “non-standard processes”, meaning not to print (not in conformity to type). They have built thousands of these so you would think they would know how, but apparently not.

Even with the supplier problems, Boeing managed to deliver a few more airplanes in the first quarter than Airbus (130 vs. 127). Management reports the plan to get back to 50 737s per month is still on track and 787 deliveries are increasing. The order book has certainly done well with massive orders from Saudi, United and others so far this year.

The Boeing Space and Defense units are still working to overcome their problems. The KC-46 is a dramatic improvement over the KC-135, the airplane it replaces, but still having

development problems. USAF briefly considered reopening the competition for additional buys but seems to have decided to stick with the KC-46 until an airplane with dramatically lower fuel burn is available.

USAF is funding some initial work on blended wing body configurations invented at Douglas which might lead to a full-scale demonstrator in four years or so, but of course there is the fickleness of government budgets to overcome. The company behind this BWB airplane is mostly former Douglas people. Here is the website: <https://www.jetzero.aero>

The stock is still in the doldrums, but with consistent performance to plan, it should go up quite a bit. Well, I certainly hope it does since I still own some Boeing stock. As I write this, we are waiting for the release of first quarter results on April 26 with hopes of significant improvement over the last few quarters. I remember hearing Alan Mulally say that an obligation of the leadership team was to make sure that the company name was still in the phone book in 100 years. A hundred years is a long time, phonebooks are no longer a thing and company names change like the seasons, but for now Boeing is still alive and seems likely to prosper for the foreseeable future.

With all that said, we can take pride in our DAC/MDC heritage and the products we delivered to customers worldwide. Those products are gradually fading out as they get older and no new ones are delivered. We can engage in nostalgia for the old days, enjoy life with family and friends, and spend time with our fellow retirees. We look forward to seeing you at the next luncheon and many more to come!

March 2023 Luncheon Speaker – My Crazy Aviation Journey

Our speaker for March was Geoffrey Thomas who walked us through his quite remarkable personal journey in aviation. He realized at an early age that aviation was his passion, illustrated by a photo of him as a child imagining a wooden box with wings was an airplane. As he reached adulthood, he trained and worked for an airline, including an assignment overseas. An amusing series of events led to his being assigned air host duties on an Australian regional carrier, an assignment he describes as the first domestic male air host in Australia. The passengers were mostly miners going to or from work at a remote location in western Australia. Geoff eventually discovered Douglas airplanes and became a life-long fan. Over time, he got to know Harold Adams, Jack McGowan, John Brizendine and most everyone who played a role in the development of the company and our airplanes. At one point, he undertook a quest to find Donald Douglas' personal boat, the Lady Fair, a ketch-rigged motor-sailer. He did eventually find her and contacted the then-current owner to make sure he knew the history of the boat. Geoff was for many years a writer for a number of aviation publications including Aviation Week and Air Transport World, but has now transitioned to operating his own business monitoring and evaluating airlines (see <https://www.airlineratings.com/>). At the conclusion of his presentation, he made a generous donation of \$1000 to the Retiree Association which speaks volumes about his fondness for Douglas and its heritage.



Geoffrey Thomas, left, presents donation check for \$1,000 to Jim Phillips.

C-17 Evacuates a Record 823 Passengers



The USAF C-17 has become a symbol of hope by locals in dire straits, and during the final days of the 2022 evacuation of Kabul, Afghanistan, the big transport more than cemented its reputation.

Its high wing, T-tailed silhouette has come to mean help is on the way after natural disasters and other catastrophes. For decades, C-17s have brought relief to hurricane and earthquake victims around the world. Their ability to carry food, water and medical supplies during the pandemic has been well documented. Their versatility in carrying cargo and passengers is legendary.

Nowhere was that more apparent than during the evacuation of Kabul last year. Afghans desperate to leave the country were packed into the airport. The huge cabin of the C-17 represented an immediate hope for rescue. A half-open aft ramp was their means of entry and they piled onto the aircraft.

In a story first covered by Defense One and then on TV by CNN, a dramatic photo aptly demonstrated their desperation. The crew reportedly decided to carry all 823 onboard to refuge on the Aug. 15 evacuation flight to

Qatar, the crew said in an interview on CNN's New Day. It was previously believed that the plane carried 640 people.

The number is a record for the C-17 Air Force Spokesperson Hope Cronin said. "Our 640 number was a little underestimated; we actually carried 823 out," Technical Sergeant Justin Triola, one of the plane's crew members, said. The previous C-17 record of people flown was 670 flown out by the US Air Force after Typhoon Haiyan hit the Philippines in 2013.

When the C-17 transports passengers, there are several possible configurations ranging from 100 to 336 people at a time. It is always up to the aircraft commander to say what they can transport at any given time.

Lieutenant Colonel and C-17 Aircraft Commander Eric Kut, who authorized the mission to fly those people to safety, said they are "trained to handle that, to max perform that aircraft." "We have women and children and people's lives at stake, it's not about capacity, or rules and regulations."

Field Trip to LAX Museum Set for July 18

As announced at the October Retiree Luncheon, we are planning a field trip on Tuesday, July 18, 2023. We will be visiting the Flight Path Museum at LAX. The museum showcases commercial aviation at Los Angeles International Airport throughout its history. Founded in 1995 as a non-profit, community-based organization to honor aviation pioneers and to recognize the economic importance of aviation to Southern California. Situated at LAX, it is the only facility with a primary emphasis on civil aviation history and development in Southern California.

After visiting the museum, we will journey to the Proud Bird Bazaar and Events Center for lunch. The Proud Bird has been changed into a Food Court with several dining/food options available.

They still have good aircraft viewing as they are adjacent to the south runways at LAX.

The tour bus for the trip will depart from the rear parking lot of Lakewood Sycamore Centre located at 5050 Clark Avenue, Lakewood CA. Bus departure time is 9:30 am. We will return to the Sycamore Center at approximately 3:30 pm.

Event cost is \$10 per person and includes transportation, museum entrance, bus driver tip, donuts and bottled water in the morning.

To make a reservation, send a check, made out to "DAC-MDC-Boeing Retirees" to Jim Phillips, 9251 Larkspur Drive, Westminster CA, 92683. Include with your reservation a contact number and email so you can be notified of any changes.

Reservations must be in by July 1st as we need to verify a minimum of 25 people to qualify for the bus being supplied by Los Angeles County.

Hope to see many of you take advantage of this opportunity. If you have any questions give me a call – 714-892-0291

Jim Phillips, VP Special Projects

Paper airplane designed by Boeing Engineers Breaks World Distance Record

By Taylor Nicioli, CNN

It's a bird... It's a plane... It's a paper airplane! The world record for the farthest flight by paper airplane has been broken by three aerospace engineers with a paper aircraft that flew a grand total of 289 feet, 9 inches (88 meters), nearly the length of an American football field.

They beat the previous record of 252 feet, 7 inches (77 meters) achieved on April 2022 by a trio in South Korea. Prior to that, the record had not been broken in over a decade.

"It really put things on the map and it's a really proud moment for family and friends," said Dillon Ruble, a systems engineer at Boeing and now paper airplane record holder, in a release. "It's a good tie-in to aerospace and thinking along

the lines of designing and creating prototypes." Ruble worked alongside Garrett Jensen, a strength engineer also with Boeing, and aerospace engineer Nathaniel Erickson. The trio are recent graduates who studied aerospace engineering and mechanical engineering at Missouri University of Science and Technology. The feat required months of effort; the team put in nearly 500 hours of studying origami and aerodynamics to create and test multiple prototypes. The engineers tested their final design on Dec. 2, 2022, in Crown Point, Indiana, with the record achieved on Ruble's third throw.

"We hope this record stands for quite a while — 290 feet (88 meters) is unreal," Jensen said in the release. "That's 14 to 15 feet (4.2 to 4.6 meters) over the farthest throw we ever did. It took a lot of planning and skill to beat the previous record."

Paper plane physics

The team had decided their best chance at beating the world record would be with an airplane design that focused on speed and minimized drag, so that the plane could fly a far distance in a short amount of time.

Gathering inspiration from hypersonic aircraft, vehicles that can fly faster than five times the speed of sound (Mach 5), specifically the NASA X-43A, the team had come up with the winning paper aircraft design — later named "Mach 5."

"Full-scale and paper airplanes have vast differences in their complexity, but both operate on the same fundamental principles," said Ruble, via email. "Some of the same design methodologies can be applied to both. One of these methods was our trial-and-error design process. For instance, we would theorize about a fold we could change on our plane, fold it, throw it, and compare the distance to previous iterations to see if the change was beneficial."

To find the best technique when it came to throwing the paper airplane, the team ran various simulations and analyzed slow-motion videos of their previous throws.

"We found the optimal angle is about 40 degrees off the ground. Once you're aiming that high, you throw as hard as possible. That gives us our best

distance," Jensen said in the statement. "It took simulations to figure that out. I didn't think we could get useful data from a simulation on a paper airplane. Turns out, we could."

Even down to the paper, which the team had decided that A4 (slightly longer than typical letter sized paper) was best for manipulating and folding into the winning airplane. With these meticulously thought-out design choices, and careful attention to the many rules and guidelines set forth by the Guinness World Record Team, the three were set to break a record.

On its record-breaking distance flight the plane was in the air for roughly six seconds. The Guinness paper plane record for duration of flight is currently 29.2 seconds.

"The design objectives for an air-time record would be vastly different from the low-drag version we built for the longest-distance record," Ruble said via email. "Increasing the wingspan and decreasing the aspect ratio would be the first steps in producing this type of plane."

Paper airplane aside, Ruble added that this tedious method of back-and-forth trials served as a testament to the importance of rigorous prototyping in the real world.

Origami enthusiasts to aerospace engineers

Ruble and Jensen began their paper plane engineering while in middle school, participating in paper airplane events held at Boeing. Ruble said he enjoyed making the paper come to life and the hard work finding ways to improve his designs. Both were also fans of origami as kids.

The record-breaking team hopes their achievements inspire other young and aspiring aerospace engineers to chase their dreams.

"Mach 5 flies best at high relative velocity, but to achieve this condition, the aircraft must be launched in a specific manner," said Ruble via email. "This technique, in addition to the complexity of the plane, means that only the most experienced paper aircraft enthusiasts would have success with the design."

"Starting with publicly available designs, anyone can hone their skills to throw paper airplanes farther and higher than their friends," he added.