



JEFF SKILES

COMMENTARY / CONTRAILS

Western Horizons

A quest for new experiences

BY JEFF SKILES

I LOVE MY JOB as an airline pilot. I love flying to exotic European destinations. I love flying through the calm and predictable skies over the North Atlantic. I love the leisurely paced regimentation of long-haul flights. I love it all, every bit of it, and yet now I find myself heading in a new direction.

Why? Well, I have flown an Airbus A330 for the last three years and have been to every one of my airline's 12 European destinations many times. The years remaining in my career are starkly limited and if I'm going to make changes, there's no better time than today. And frankly, I get bored easily, and I just like to try new things from time to time. All of that is why I find myself in Dallas training on the Boeing 787. If all goes as planned, I will shortly be flying in a different direction — westward across the Pacific to China, Australia, and Japan.

You might wonder what sort of training an airline pilot goes through to fly a different aircraft. Its considerably more complex than checking out in a new model of Cessna and ultimately will result in a new type rating added to the list on the back of my pilot certificate.

WHAT'S A TYPE RATING?

A type rating — as the name would lead one to believe — is an endorsement to fly a specific aircraft type. Pilots must possess such authorization to fly as pilot in command (PIC) of any aircraft weighing more than 12,500 pounds. I will have seven type ratings by the end of this process, which for a professional pilot like me is neither a little nor a lot. I have heard that some people have so many type ratings that they must carry an additional airman's certificate just to contain them all!

You might think this is cheating, but simulators can do things you would never ask of an airplane, and I can practice approaches in San Francisco, Dallas, and Boston all in the same four-hour period.

Each type rating represents the completion of an approved training course culminating in a checkride taken to airline transport pilot (ATP) standards. This training and checkride might not be done in an actual aircraft though. In fact, in today's world, it rarely is; instead a representative simulator is used.

You might think this is cheating, but simulators can do things you would never ask of an airplane, and I can practice approaches in San Francisco, Dallas, and Boston all in the same four-hour period. Simulators are so realistic that, believe it or not, my first actual takeoff and landing in the airplane will be accomplished with paying passengers in back.





The cockpit procedures trainer



Capt. Pablo Bartlett and me

GROUND SCHOOL

Most type rating courses last approximately six weeks divided up equally among ground school, simulator training, and what is called OE or operational experience. To call the first phase “ground school” however, diminishes the vast changes that have occurred over the last quarter century in airline training. When I started in this business it truly was a ground school with an instructor and an overhead projector teaching various arcane mechanical details about the aircraft. Today such system information is conveyed in several days’ worth of streaming video courses viewed at home before you ever set foot in the training center. The actual formal training is procedures based and is more one on one. Well, actually, one on two: one instructor and two pilots.

I have really lucked out here because I have been assigned Capt. Pablo Bartlett, EAA 1261706, as my simulator partner. Training with a captain as opposed to another first officer is a vastly easier

proposition. Pablo proves to be a definite cut above as a pilot and even more happily, Pablo has most recently been flying the Boeing 777. The 777 is quite similar to the 787, and he will be able to help me with my decidedly more difficult transition.

AIRLINE TRIBES

You see, at least at the moment, I’m an Airbus guy. Large airliners, and almost necessarily their associated pilots, are quite tribal – the tribes being Airbus and Boeing. Within the tribes there is shared heritage and culture as you might imagine. Changing tribes, however, is a more difficult task. When I moved from the Airbus 320 to the Airbus 330, it was a familiar and easy transition even though the 330 is a much larger aircraft. The architecture of the flight management computers is virtually the same, the system design is very similar, and the cockpits are close to identical. Switching to a Boeing, however, is like learning a new dialect of the same language. Its just different enough to be a challenge.



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The simulators bobbing up and down in the simulator bay.

COCKPIT PROCEDURES TRAINER

Since we have already covered the aircraft systems before arriving in class, our ground school is spent learning and practicing procedures. We do this in a cockpit procedures trainer (CPT) which is kind of an overgrown desktop flight simulator. It has a center console for the flaps and throttles and computer screens for the rest of the cockpit. These are touch screens so we can operate the systems, but they aren't as easy to use as the aircraft controls. Here, we load and verify flight routings, practice cockpit checks, and even run emergency checklists.

With simulators costing as much as \$20 million, simulator time is valuable. Learning the rote procedures and the operation of the flight management computer in the CPT first helps to control training costs.

At the end of our two weeks of ground training, Pablo and I had a lengthy exam. Four hours were spent flying two simulated flights in the CPT with various system failures followed by a two-hour test evaluating our system knowledge.

SIMULATOR

Simulator training progresses as you might expect with the usual stalls, unusual attitudes, engine fires, engine failures, and emergency decompressions. Various types of instrument approaches are repeatedly practiced, often with an engine out and the visibility set at minimums. But, modern airline pilots are as much system managers as aviators, and getting all the electrons moving in the same direction is critical to success. For me as an Airbus guy, learning the intricacies of the Boeing flight management computer system was the most difficult part of the training. At first, the "box" was a mystery to me, but by the

second week, my fingers were mostly going for the right keys and the simulator was doing what I told it to.

Day eight in the simulator is maneuvers validation (MV) day, the first of two check-ride-like "gates" Pablo and I must pass through to complete our training. By this time an engine failure at lift-off or a stabilizer runaway was a commonplace occurrence and easily handled. Together Pablo and I worked as a team to address any problems we encountered. More importantly for us, the light at the end of the tunnel was clearly visible.

MY NEW PILOT CERTIFICATE

Finally, day 10 arrived and with it, our line oriented evaluation (LOE), a test of decision-making skills in real-world conditions. This final test represented the conclusion of more than a month of study and practice including 21 hours of systems study, 50 hours of briefings and de-briefings, 40 hours in the CPT, and another 40 hours in the 787 simulator. Not to mention the countless hours in our hotel rooms studying our manuals with posters of the cockpit taped to the wall. In the briefing room after the LOE, an FAA designated examiner passed over our temporary certificates with a new notation of B787 noted in the list of approved aircraft types.

Still ahead I have a couple of days of Pacific theater training and 25 hours of operational experience, but the heavy lifting is over. I am now a qualified pilot on the Boeing 787 Dreamliner! **EAA**

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