FITS

Times (and Training Requirements) Are a Changing

FAA/Industry Training Standards

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Part 2

Current Status of FITS

by Thomas Glista

For any of you who missed Part 1 of the FAA/Industry Training Standards (FITS) article, let me give you a brief overview of the why and what of FITS. Advanced technology systems that have previously been the sole domain of airlines and expensive corporate jets have trickled down into small, single engine aircraft. In the past, displays, avionics, and navigation equipment all looked and worked pretty much the same no matter who manufactured the unit. For example, VOR/ILS heads all basically looked alike—a rotating compass around the outer edge of the unit, a horizontal and vertical path needle, or light bar, to-from indicator, and an "off" flag. You tune and identify a frequency, select a course, intercept it, and go. You've seen one; you've seen them all. Advanced systems and displays, on the other hand, look different and the way the pilot uses them may differ. If you try to program a Bendix/King ® KLN 90B the same way you program a Garmin® GNS 430, it probably will not work very well.

So, why don't the big boys have problems? First and foremost is training. Basically, air carrier captains are required to take recurrent instrument proficiency training every six months and an aircraft check every 12 months (Title 14 Code of Federal Regulations (14 CFR) §121.441). Charter captains who are authorized to fly IFR have a similar requirement (14 CFR §§135.293 and 135.297). Most corporate jets are large aircraft (over 12,500 lbs. maximum gross takeoff weight) that require a two-pilot crew and the captain to hold a type rating in the aircraft. Also, 14 CFR §61.58 requires that the pilot in command of an aircraft type certificated for more than one flight crewmember must complete a proficiency check at least every 12 months in an aircraft that is certificated for two pilots and complete a proficiency check at least every 24 months in the type of aircraft the pilot in command is flying. Therefore, airline, charter, and corporate pilots are constantly taking recurrent and proficiency training in the type of aircraft they operate.

In general aviation, a pilot with a commercial certificate with a single and multi-engine-land certificate and instrument rating could satisfy the regulations by taking a flight review every two years in a Cessna 150, then go fly off in a Mitsubishi MU-2, a 250 knot, twin-engine turboprop.

FITS is working to take the best practices of the airlines and corporate jets, tailor them to the GA environment and provide incentives for their use without imposing any new regulatory requirements—all the while increasing safety and convenience and reducing the time and cost of training.

Later I will describe our "Launch Customers" and the products the FITS team is currently developing. It may seem simple to develop a syllabus; many syllabi have been developed, published, and used successfully. But bear in mind that the FITS team will be developing innovative approaches to training. We intend to look into scenario based training, aeronautical decision making, single pilot resource management, and risk management. We may also conduct studies on the effectiveness and expanded use of simulation devices, including different levels of personal computer-based aviation training devices (PCATDs).

FITS is developing and growing. Our "launch customers" are working closely with the FAA and the Air Transportation Center of Excellence for General Aviation, Center for General Aviation Research (CGAR) to produce training standards for these customers. We say that we have two "Launch Customers," Elite Flight Center and Eclipse Aviation, but we really have four. Elite Flight Center is actually three entities: Elite Flight Center, AirShares Elite, and Cirrus Design. AirShares Elite (one of one) is developing an owner flown shared ownership program for the Cirrus Design (two of one) SR-22. Most SR-22 fractional owners are pilots, but they had never flown a Cirrus. These pilots needed transition training, both for safety and for insurance purposes. Elite Flight Center (three of one) was formed to handle the transition training. In the course of selling the aircraft, AirShares Elite received inquiries from non-pilots. They wanted the aircraft for transportation. These business people were not what we call "aviation enthusiasts." Aviation enthusiasts are people who want to fly for the sheer joy of breaking the surly bonds of earth. No, these were people who wanted to get from here to there safely, quickly, and efficiently. The airplane, like a car or a computer, would be a tool to get something done. They knew they had to learn to drive a car and work a computer, so they know that they need to learn to fly. But these are not the type of people who can hang around airports to pick up an hour or two of flight to fill their logbook in hopes to get another rating. They are busy professionals with things to do and businesses to run. They also

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would not be satisfied with only a VFR private pilot certificate. They need to be able to plan on flying safely to their destination when they want to, not be restricted to VFR weather only. Consequently, they need to get a private pilot certificate with an instrument rating quickly and efficiently.

So how does Elite Flight Center meet the needs of their customers?

First, Elite Flight Center has applied to their local Flight Standards District Office for a pilot school certificate under 14 CFR part 141. For simplicity purposes, their initial application is for two flight courses: a Private Pilot-Airplane, Single Engine Land course and an Instrument-Airplane course. The FITS team is currently working on an ab-inito combined private/instrument curriculum. We believe that this curriculum could be approved under 14 CFR §141.57, Special Curricula, which reads: "An applicant for a pilot school certificate or provisional pilot school certificate may apply for approval to conduct a special course of airman training for which a curriculum is not prescribed in the appendixes of this part, if the applicant shows that the training course contains features that could achieve a level of pilot proficiency equivalent to that achieved by a training course prescribed in the appendixes of this part or the requirements of part 61 of this chapter." As soon as the initial pilot school certificate is issued to Elite Flight Center, they will apply to add the combined private/instrument course to their pilot school certificate.

In February 2003, the first two production Cirrus SR-22's, featuring the Avidyne FlightMax™ Entegra, 10.4 inch horizontal Primary Flight Display (PFD) were delivered. As you can see by the photo (left) of the SR-22 cockpit, it looks nothing like the conventional cockpit you find in your 1965 Cessna 172. The FAA's Airman Testing Standards Branch conducted four evaluation flights of the SR-22 with this cockpit. Their initial reaction was that it was easy to fly with the PFD once you got used to the presentation. They saw no major difficulty in transitioning to this airplane WITH PROPER TRAINING (emphasis added). They are in the process of revising the Instrument Practical Test Standards and will make changes to introduce tasks to address this new type of equipment. By the time you read this, a transition curriculum for the SR-22 should be complete and on our website.


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Cirrus SR22

Speaking of websites, FITS now has a website at <www.faa.gov/avr/afs/fits>. This website is currently very simple. It contains additional in-depth information on the FITS program, a few of the FITS products, links to associated websites (i.e., Cirrus Design, Eclipse Aviation, Center for General Aviation Research, Avidyne, etc.). The FITS program is not planning to have a supply of paper documents. All standards will be electronic on the website. As the FITS program evolves so will the website. I will write about that in Part 3 of this article.

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Cirrus SR22

Besides the combined private/instrument curriculum and the transition training curriculum, the FITS team will develop a recurrent training syllabus and standards, and a flight instructor syllabus and standards for the Cirrus. The recurrent training syllabus is taking a customer friendly approach by giving the pilot a new recurrent training option. The main thrust of this recurrent program is continuous training throughout the biennium (two-year period), sort of like doctors or lawyers are required to accomplish. The specific details are still being worked on, but basically, the pilot must complete a module of instruction every quarter or half year. It might be on line or off a CD. Once in the biennium the pilot must fly with an instructor (who has completed his/her own training in this system). At the end of each module the pilot can print out a certificate of completion. On-line or CD modules can be completed at the pilot's convenience.

One of the beauties of this system is that modules can be quickly changed to meet the needs of the pilot. Recently, airspace was changed due to security requirements. Instead of waiting two years to learn about this with an instructor, the next module you take could include this information. So, how do we make this a recurrent training program under the CFR's? Currently, there are many ways to comply with the flight review rule. You could: receive the one hour of flight instruction and one hour of ground instruction (§61.56(a)); pass a pilot proficiency check (§61.56(d)); or satisfactorily accomplish one or more phases of an FAA-sponsored pilot proficiency awards program (§61.56(e)). Most pilots think of the FAA's "WINGS" program when they hear "FAA-sponsored pilot proficiency awards program." However, the FAA can approve other programs as pilot proficiency awards programs. In this case, the FITS team will bring its program to the appropriate FAA office (Flight Standards Service, General Aviation and Commercial Division, which is where I work) for approval. Since this program should be designed to be at least equivalent (or higher) standard than the current flight review requirements, the FAA can designate this as another "FAA-sponsored pilot proficiency awards program."

Our other "Launch Customer" is Eclipse Aviation. The Cirrus Design SR-22 is an advanced technology piston engine powered airplane; the Eclipse 500 is an advance technology small turbine powered airplane. Late last year, Eclipse Aviation "determined that the (Williams International) EJ22 (engine) is not a viable solution for the Eclipse 500 aircraft" and terminated the contract with Williams. The Eclipse 500 was originally scheduled to receive FAA type certification in Winter 2003/2004, with deliveries beginning in January 2004. Eclipse now has an agreement with Pratt & Whitney Canada Corp. (P&WC) to equip the Eclipse 500 with P&WC's PW610F turbofan engines. Based on the PW610F development schedule, the Eclipse 500 is now projected to receive FAA type certification and begin customer deliveries in the first quarter of 2006. Eclipse Aviation representatives have been active in the FITS group from its inception and we are working on their training standards, including transition (type rating training), flight instructor and recurrent. Eclipse is interested in the training developed for the SR-22 since many of their fu-

ture pilots will be graduates of the Cirrus program. Additionally, the Eclipse 500 is a single pilot aircraft and subject to the same recurrent training requirements as the SR-22 (yes, the Eclipse 500 will be a biennial flight review airplane). Being involved in the development of the SR-22 "FAA-sponsored pilot proficiency awards program" will aid in the development of the Eclipse recurrency program. Eclipse Aviation is planning to apply for a 14 CFR part 142, Training Center Certificate.

There are two other teams working with the FITS program. They are the FITS Oversight Committee and the FITS Workgroup. The FITS Oversight Committee has been established to provide industry oversight guidance to FAA and the FITS team on the FITS Program Plan, team goals and methodology, and schedule and tasking. It consists of representatives from the FAA, the Small Aircraft Manufacturers Association, the General Aviation Manufacturers Association, the Aircraft Owners and Pilots Association-Air Safety Foundation, and the National Air Transportation Association. The FITS Workgroup will evaluate the products the FITS program is producing, and develop guidance and recommend appropriate training programs and guidance for aviation safety inspectors and designated pilot examiners. The Workgroup may also provide recommendations on products they believe the FITS program should develop. FITS Workgroup members include FAA representatives from the FITS team, the Flight Standards Training Division, representatives from the aviation safety inspector's union, and field inspector subject matter specialists.

Another aspect of FITS that we are working on is a process for promulgating FITS. In general aviation, the FAA often issues advisory materials and recommendations (i.e. Advisory Circulars), "throws them over the fence," and hopes the general aviation public picks them up. Sometimes they do; sometimes they don't. When they don't, the time, resources, and information go to waste. That is why we are working with the FAA Aviation Safety Program, industry organizations, aviation magazines, insurance companies, and training suppliers. We want to make sure that we not only develop timely industry training standards, but the aviation public and industry knows about them and has easy access to them. All standards will be placed on the FITS website.

As you can see the FITS program is well underway. We are working hard at developing products for our launch customers. As with any new program, there are some growing pains. So we are working hard to take care of our "Launch Customers." We will be using what we have learned so far and expand the program. But, even now we are contacting other customers (or potential customers) to expand this program. We have had meetings with Adam Aircraft, Cessna, New Piper, and NASA. We have also met or talked with Avidyne, Electronic Flight Solutions, Weather Services International, flight training device and personal computer-based aviation training device manufacturers, FAA's local and regional offices, and other organizations.

In the next issue I will discuss the future view of FITS.

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Eclipse 500

Eclipse Aviation photo