

# FITS

Times (and Training Requirements)  
Are a Changing

## FAA/Industry Training Standards



Mario Toscano photo

### Part 1 Overview

by Thomas Glista

*This is Part 1 of a three-part article regarding the future of general aviation training. It describes a modernized, pro-active FAA approach to match its general aviation policies and procedures with new aircraft, new avionics, and new flight technologies.*

**A** one time one-size-fits-all training approach best describes the current general aviation training paradigm. The aircraft might be single engine or twin engine, but the technological systems (better known as cockpit instruments) were mostly standardized. However, new developments in technology have changed these generic systems, which in turn change the way that pi-

lots need to be trained. To fill this need the FAA initiated the FAA/Industry Training Standards Program or FITS.

Under the FITS program, the FAA works with industry partners, old and new, to develop industry consensus standards for pilot training and checking. The use of consensus standards is explained in OMB Circular A-119, Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities. This circular "directs agencies to use voluntary consensus standards in lieu of government-unique standards except where inconsistent with law or otherwise impractical."

To train a safe pilot better in less time and with less cost, new and innovative ways to train are being developed. With older technological systems, it did not matter who built the system. They all functioned and looked similarly. Unfortunately, new technological systems (such as the Global Positioning System or GPS, as it is better known) that perform similar functions may not look alike and pilot interaction with these systems may be completely different. Consequently, "one-size-fits-all" training may no longer be adequate. The FITS program seeks an evolutionary approach to change, which is responsive to the pace of development in the general aviation community and which take





The Cirrus SR-22 instrument panel. (Mario Toscano photo)

place within the current Federal aviation regulations. As new technology and aircraft are being developed, the FITS program will allow the FAA, along with its industry partners, to identify future training needs and develop training products appropriate to the needs of the users.

The many new technological developments will have a pronounced effect on general aviation flight operations, as new cockpit, flight technologies, and aircraft are developed and brought to the market. Ultimately, these changes will also affect general aviation training. For example, the complexity of the airspace will increase as the National Airspace System (NAS) is modernized and the FAA's Operational Evolution Plan (OEP) takes effect. The OEP is the FAA's ten-year plan to increase the capacity and efficiency of the NAS while enhancing safety and security. It has identified four core problem areas that it will concentrate on—arrival/departure rates, en route congestion, airport weather conditions, and en route severe weather.

To show how this collaboration between the FAA and industry works, the FITS program has two "launch customers." Eclipse Aviation is developing a new small, six-place, turbojet aircraft. Elite Air Center will train pilots to fly advanced technology reciprocating engine-powered aircraft, such as the Cirrus SR-22.

Safer Skies is a major FAA initiative tasked with achieving a significant reduction of fatal accidents by 2007. Under the Safer Skies program, the FAA and FITS customers will be working with the Air Transportation Center of Excellence for General Aviation. Public Law 101-508 enabled the FAA to grant one or more colleges or





## Eclipse 500

Eclipse Aviation photo

universities to establish and operate an air transportation center of excellence. These centers form a cumulative repository of knowledge in a variety of subjects (such as airspace, airport design, and aviation safety and security) and encompass the entire spectrum of research and development from basic research to engineering development and prototyping. In March 2001 the FAA established the Center For General Aviation Research (CGAR). This team, lead by core member Embry-Riddle Aeronautical University includes the University of North Dakota, the University of Alaska, Wichita State University, and Florida A&M. The goal of the Center for General Aviation Research will be to develop synergistic relationships, which can significantly enhance opportunities for innovation in general, aviation research activity. For more information on CGAR you can visit their Web site at <<http://www.cgar.org>>.

FITS focuses on the segment of general aviation that uses single pilot, small reciprocating or turbojet powered aircraft for transportation. Air carriers and larger two-pilot corporate jets already have extensive training requirements. The safety record of two-pilot corporate jets is just about the same as air carriers. At the lower end of the general aviation spectrum, the

light-sport pilot rule is being developed using consensus standards in accordance with OMB Circular A-119. Additionally, it is expected that light-sport pilots (when the rule is finalized) and recreational pilots will be limited to the size and complexity of aircraft that they can fly, to what airspace they can operate in, operate only in VFR conditions, and to carry only one passenger. This limits their potential exposure to hazards.

It is the middle area of general aviation activity, personal or professionally flown single-pilot aircraft (both piston engine and turbine-powered) with new technologies, that is the current focus of FITS. FITS will develop three categories of training standards.

### 1. Generic FITS for the general aviation community as a whole.

Generic standards will be developed for broad categories of training functions, such as the flight review, complex- and high-performance training, and other functions. Individual training entities (e.g. flight instructors, pilot schools) may adapt them for a particular aircraft or other scenarios.

### 2. Specific FITS program for a specific aircraft or

**technology.** Specific standards will be developed for a particular customer or application. For example, the FITS launch customers are Eclipse Aviation and Elite Air Center. They will be working with the FAA and the Center of Excellence for General Aviation to prototype and implement initial, transition, recurrent, and flight instructor training requirements of their customers and flight operations.

Future specific FITS will be developed as new aircraft and new technologies require. For example a specific FITS might be developed to train a pilot on a specific display or capability the pilot has retrofitted into his or her aircraft.

### • Mandatory FITS standards in accordance with 14 CFR §61.31(h).

In rare instances, the FAA may elect to invoke 14 CFR §61.31(h) to require aircraft type specific training for aircraft with unusual operating characteristics or flight systems to ensure safe operations. Because of the regulatory implications of this FITS, notice and/or public comment would normally be required to implement



this provision. Promulgation could be through an amendment of the aircraft flight manual, which refers to the FITS standard directory.

It is not the intention of the FITS program to change regulations. FITS will use flexibility within the current regulations to provide incentives. For example, a pilot school may be approved for a combined private/instrument curriculum under 14 CFR §141.57, Special Curricula. If approved under §141.57, the graduates may not be required to have the minimum hour requirements of 14 CFR part 61 or the appendixes in part 141. Innovative training programs (which may include some type of simulation or flight training devices) could result in a reduction of the time and cost of receiving a certificate.

There are other flexibilities within the regulations, even if you already have a pilot certificate. Although the FAA is open to other ideas (let's think outside the box), we have not researched all possibilities, but one is the flight review requirements in 14 CFR §61.56. There are many ways to comply with this rule. You could: receive 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)). Now what is an FAA-sponsored pilot profi-

ciency awards program? Yes, we all know about the "WINGS" program, but it might not only be that. The FAA can approve other programs as a pilot proficiency program. We would like to see continuing education programs that apply to the operations of a particular pilot. For example, every six months a pilot could complete a training module lesson at home on his or her computer (on-line or CD). Training modules could be tailored to the area the pilot lives (high altitude, mountainous terrain, complex airspace, etc.), the time of year (winter operations, icing conditions, thunderstorms), and the type of aircraft the pilot flies. Sometime in that two-year period the pilot must fly with an authorized flight instructor. Training will be more complete, more applicable, and more convenient.

The FAA also plans to discuss FITS with most of the major aviation insurance companies. The aviation insurance community may embrace the concept of greater standardization in training. Some may be willing to give premium credits (read money) or better coverage to pilots who train under this type of program. The ultimate goal of the FAA with the FITS program is to help you become a better and safer pilot using incentives such as greater convenience, more relevant training, or ordered costs.

Why are manufacturers or equipment providers getting involved in FITS? Accidents and incidents are

some of the worst things that can happen to a manufacturer, besides giving the aircraft a bad reputation (which results in lower sales), insurance cost to the manufacturer increases (higher costs). Proper training is the key to safe operations. One of the main reasons air carriers are so safe is that the pilots are continually trained. Their training is not general in nature. Air carrier training is aircraft and mission specific.

In general aviation, training is more generic. With older technological systems, it did not matter who built the system. They all functioned and looked similar. New aircraft and technologies are being developed in general aviation. Unfortunately, new technological systems that perform similar functions may not look alike and pilot interaction with these systems may be completely different. Consequently, "one-size-fits-all" training may not be adequate. There is no question that general aviation is modernizing. The responsibility rests with the FAA to ensure that aviation safety is not compromised in the process. That is where FITS come in. The outlook is worth the wait.



*Thomas Glista is an Aviation Safety Inspector in Flight Standards' General Aviation and Commercial Division and leads the FITS program. In the next issue, Glista will discuss the current status of FITS.*



Cirrus SR22

Mario Toscano photo

