**Update on Training Reform Symposium**

**Preliminary Report and Stakeholder Comments**

**October 31, 2011**

**The General Aviation Pilot Training Reform Initiative**

**Society of Aviation Flight Educators (SAFE)**

# Update – Comments from Stakeholders on Preliminary Report

The primary purpose of this update is to summarize comments received from government and industry stakeholders on the projects identified in the June 2011 Preliminary Report generated from the Pilot Training Reform Symposium conducted by the Society of Aviation and Flight Educators (SAFE) in Atlanta, GA in May 2011. This document also discusses related activities that occurred following the symposium and outlines SAFE's issues and concerns with pilot training reform, including its future course.

Background

Throughout 2010, SAFE members conducted an internal dialogue regarding the stagnant general aviation fatal accident rate during the preceding decade, as well as the alarming declines in student pilot starts, retention, and completions. We hypothesized that deficiencies in the general aviation pilot training system were a root cause for all of these phenomena. We concluded that SAFE should initiate an effort to examine the training system with the intention of changing pilot training doctrine, standards, curricula, and instruction methods.

In November 2010, SAFE announced that it would conduct a Pilot Training Reform Symposium in May 2011. The symposium was structured to address key issues regarding general aviation safety and reduced student starts, as well as other indicators of general aviation decline and how they were related to the pilot training system.

The Aircraft Owners and Pilots Association (AOPA) announced its Flight Training Student Retention Initiative in November 2010 as well during the AOPA Summit in Long Beach, CA. Like SAFE, the AOPA initiative focused on declines in student pilot starts and other industry activity indicators. The AOPA initiative did not, however, focus on safety issues and their relation to the pilot training system.

In May 2011, SAFE held its Pilot Training Reform Symposium in Atlanta, GA. The 148 attendees included many recognized leaders in the pilot training community, Federal Aviation Administration (FAA) officials, leaders and staff from key general aviation organizations, and other stakeholders from the general aviation community and the aviation media. The symposium's keynote address was delivered by FAA Administrator Randy Babbitt.

The first day of the symposium was devoted to six panels that covered safety and growth indicators linked to training, doctrine, standards, curricula, and instruction issues. The second day consisted of breakout groups that brainstormed on these issues. The details of the panels and breakout groups are contained in the symposium Preliminary Report published by SAFE, which is available at http://www.pilottrainingreform.org/documents/Symposium_Prelim_Report_06Jun2011.pdf.

Symposium breakout groups generated thirty recommendations related to reforming the pilot training system. These recommendations covered a wide range of overlapping training issues. Accordingly, SAFE elected to distill related recommendations into six comprehensive "projects" which encompassed all thirty of the original breakout group recommendations. We classified these recommendations as "projects" because they included specific outcomes and specified accountability ("who" should do "what" by "when").

The six project recommendations follow:

1. Conduct a thorough general aviation fatal accident root cause analysis to pinpoint underlying accident causality as a means to create effective remedial actions.

2. Create a new flight review option that can be enabled as an FAA-sponsored pilot proficiency award program.

3. Revise FAA doctrine and standards to implement scenario-based testing, risk management, and other higher order pilot skills.

4. Modify flight instructor doctrine, initial testing, and renewal procedures to include the teaching of higher order pilot skills.

5. Implement voluntary flight instructor professional accreditation programs and continuing education that emphasize higher order pilot skills, scenario-based training, and interpersonal relationship skills.

6. Create and implement model curricula that incorporate higher order pilot skills, scenario-based training, and integration of simulation and other teaching methods to include interpersonal relationship skills.

Details of each of these six projects are contained in Appendix A of the Symposium Preliminary report, available for download as previously noted.

On June 6, 2011, SAFE issued the Symposium Preliminary Report and requested that symposium attendees and other stakeholders provide comments by September 30, 2011.

Related Events Occurring after the Symposium

The symposium received wide coverage from the aviation media and attendees were enthusiastic regarding the potential for meaningful follow-on activity. We believe that subsequent activity may have been catalyzed as a direct result of SAFE's pilot training reform initiative—for example, online training syllabi were made available for free to instructors and students from courseware providers and others within weeks after the symposium—while other activities may have been underway prior to the SAFE initiative. In any case, several of these

initiatives will directly or indirectly examine current pilot training to address safety issues and/or training system elements that should be changed to address industry growth issues.

We believe the following FAA and industry activities represent significant efforts that will address not only the symposium recommendations, but also meaningful training reform:

1. *AOPA Flight Training Student Retention Initiative* – As noted earlier, AOPA continues to pursue this effort. An initial meeting in November 2010 identified issues with the pilot training system that are impacting student pilot starts, retention, and completions. In September 2011, AOPA conducted a follow on meeting during AOPA Summit in Hartford, CT, to develop remedies for the issues identified.

2. *Flight Training Standards Aviation Rulemaking Committee (ARC)* – This ARC was convened by FAA in September 2011 to specifically address needed changes in FAA pilot training standards such as airman knowledge tests and practical test standards (PTS). The ARC may address other pilot training issues as well.

3. *General Aviation Joint Steering Committee (GAJSC)* – This committee, in existence for more than a decade, consists of industry and FAA representatives who develop focused interventions designed to address key general aviation safety problems. It has recently been revitalized and reorganized, including creating a new Safety Analysis Team (SAT) to support GAJSC activities. New subject matter experts have been added to the committee and its working groups as well.

4. *CFI Professional Accreditation Committee* – This industry committee was formed recently to create an entry-level professional accreditation path for newly certificated flight instructors. This is a direct response to SAFE's Project Recommendation #5 concerning professional accreditation.

5. *Other industry pilot reform efforts* – There are numerous small- and large-scale efforts involving industry pilot training reform activity currently underway. In particular, SAFE notes the joint effort by Cessna Aircraft, King Schools, and Redbird Simulations to revamp pilot training curricula and methods. This effort directly supports SAFE's Project Recommendation #6 concerning curriculum reform.

Summary of Stakeholder Comments

In its issuance and transmittal of the Symposium Preliminary Report on June 6, 2011, SAFE requested specific comments from stakeholders by September 30, 2011 on the six recommended projects. We directed this request to individuals and organizations that participated in the symposium, as well as other interested parties.

SAFE has received comments from fifteen organizations and individuals. Without exception, the responses either directly supported SAFE's project recommendations, or provided positive commentary on the Preliminary Report or the intentions of the pilot training reform initiative.

Six replies were brief and general in nature and were submitted by Aviation Supplies and Academics, Inc., Diamond Aircraft, the FAA Safety Team (FAAST), the Flight School Association of North America, King Schools, and Master Instructor Jeanne MacPherson.

Nine detailed replies were received from the following: the Aircraft Owners and Pilots Association (AOPA), Cessna Aircraft, Cirrus Aircraft, the Experimental Aircraft Association (EAA), the General Aviation Manufacturers Association (GAMA), the FAA, Gleim Publications, Inc., CFI Professional Accreditation Committee Chair Dave McVinnie, and Sporty's Academy, Inc. These replies are addressed in more detail in the following section.

<u>Analysis of Major Comments</u>

SAFE requested that comments be provided in the context of our six recommended projects. Consequently, the nine more substantive comments were analyzed from the perspective of these projects. The following summary captures the highlights of the comments along with SAFE's analysis:

1. **Fatal accident root cause analysis**

   <u>Stakeholder Comments</u>: AOPA agreed that root cause analysis is key to identifying areas for improvement. The organization cited the work of the Air Safety Institute and the GAJSC as being supportive of this effort. Similar comments were made by GAMA and Sporty's. Cirrus went further, agreeing with SAFE's hypothesis that National Transportation Safety Board (NTSB) factual accident reports do not accurately address the root cause of most accidents. Gleim Publications cited the need for better accident exposure data so that accident rates would be more accurate.

   <u>SAFE Analysis</u>: SAFE is concerned that attempts at accident root cause analysis historically may not, in fact, have delved deeply enough into true root causes of fatal accidents. SAFE believes poor risk management by general aviation pilots is a crucial factor in these accidents. To adequately test this hypothesis, accident evaluators will need to go beyond the raw NTSB data contained in factual reports of individual accidents to determine if the pilot effectively identified, assessed, and mitigated hazards and risks to the accident flight. We urge the GAJSC Safety Analysis Team to carefully consider this as they begin their current accident analysis efforts.

2. **New flight review options**

   Stakeholder Comments: AOPA, FAA, and GAMA cited recent changes to the existing flight review and pilot proficiency program ("Wings" program) as evidence that pilots now have more options to satisfy recurrent training requirements. On the other hand, Cirrus, Gleim, and Sporty's cited inadequacies in current flight review and Wings program options and agreed with SAFE that new options under the Wings program were desirable. AOPA raised legitimate questions regarding how such new options could be implemented without making the recurrent training process more complex.

   SAFE Analysis: SAFE may not have adequately explained the proposal or rationale for expanded Wings program options as a substitute for the flight review. Our thesis is that a "one size fits all" approach to recurrent training is not a good fit for most pilots since there is a wide range in pilot experience, how pilots use the aircraft they fly, and the types of aircraft they fly. For example, a 60 hour renter pilot who flies five hours a year and has only ten hours in type may need to demonstrate physical piloting skills with an instructor every time he rents the airplane (as numerous operators already require for such pilots) rather than every two years. On the other hand, a 9,000 hour pilot with 3,000 hours in type who flies 150 hours a year in the air traffic system in his own airplane perhaps might only need to demonstrate proficiency in physical piloting skills once every four years. Instead, this pilot might be better served with an annual on-line training program that addresses risk management issues customized to the pilot's flight operation.

   To adequately test this hypothesis, accident data must be examined in detail to determine the true root causes driving fatal accidents. The static general aviation fatal accident rate may be a deterrent to future industry growth; we must consider not only how to train new and current student pilots, but also how to effectively reach the more than 500,000 existing rated pilots. A more nuanced, tailored, and incentive-based pilot proficiency program that pilots can select in lieu of current flight review options is the best way to accomplish this.

3. **Revised doctrine and standards**

   Stakeholder Comments: The FAA has directly addressed this SAFE recommendation by chartering the previously mentioned ARC. The ARC will address the adequacy of the knowledge tests and possibly other subjects. This effort was supported by comments SAFE received from AOPA, Cessna, and GAMA. Comments from Cirrus, Gleim, and Sporty's also emphasized the need for practical test standard (PTS) reform and the need for continuous industry involvement in the process for updating doctrine and standards.

   SAFE Analysis: SAFE applauds the formation of the knowledge test ARC and will actively participate as a part this important committee. We believe the scope of ARC activities must expand beyond the knowledge test process to include the underlying

doctrine and supporting documents, as well as PTS reform. In particular, the ARC should investigate the possibility of evolving the PTS focus from maneuvers-based to more scenario-based and make it more effective in evaluating higher order pilot skills such as risk management.

4.  **Modified instructor doctrine, testing, and renewal**

    Stakeholder Comments: The FAA cited recent draft changes to advisory circulars and internal directives as evidence that it is moving forward with improving flight instructor doctrine, testing, and renewal requirements. The FAA response also noted that the results of the knowledge testing ARC could have a positive impact on this issue. AOPA, Cessna, and Cirrus cited their own flight instructor qualification and education efforts as indicative of the high priority they place on improved flight instructor performance. GAMA indicated that the GAJSC could conceivably address this subject in future initiatives.

    SAFE Analysis: SAFE recognizes that pilot training doctrine and standards reforms should be implemented as a precursor to related changes for flight and ground instructors and other aviation educators. Changes in flight instructor doctrine and standards should then be fully reflected in initial instructor training, testing, and renewal procedures. In particular, the Flight Instructor Refresher Clinic (FIRC) program represents the best means to reach all instructors and to standardize instructional techniques that emphasize the teaching of higher order pilot skills such as risk management.

5.  **Professional instructor accreditation**

    Stakeholder Comments: This recommendation has been embraced by an ad hoc industry committee chaired by Master Instructor David McVinnie. Committee members include representatives from Master Instructors LLC, AOPA, Cessna, and the University Aviation Association (UAA). A summary report received from this committee recommended the creation of an Aviation Educator's Accreditation Program. This program would provide entry-level instructors with techniques designed to improve instructor professionalism, especially in the area of interpersonal skills and other techniques to improve communications with their student pilot customers. The program would supplement the successful Master Instructor Continuing Education Program that is focused on more experienced instructors. These and related accreditation efforts were supported by comments from AOPA, Cessna, Cirrus, and Sporty's.

    SAFE Analysis: We are encouraged by, and supportive of the rapid formation and progress of the CFI Professional Accreditation Committee. A professional accreditation program for entry-level flight instructors would benefit instructors, their employers, and above all, their customers, thus providing the means for increasing student pilot starts,

retention, and completions. This is necessarily a long-term effort that will produce positive results over time.

**6. Develop modified curricula**

Stakeholder Comments: As training reform results in modernized doctrine, standards, and improved instruction, it must ultimately be reflected in practical curricula and integrated training programs in order to be delivered successfully to customers. AOPA, Cessna, Cirrus, EAA, Gleim, and Sporty's all cited the importance of revised curricula and described their ongoing efforts in this area. These efforts can be directed broadly at the entire population, or more narrowly at affiliated groups or specialty organizations. For example, EAA cited their Type Club Coalition as a means of reaching particular audiences with specialized safety messages and information. Cessna cited their efforts with King Schools and Redbird Simulations as a way to reach the broader *ab initio* community.

SAFE Analysis: This initiative involves mostly industry as opposed to FAA initiatives, and is critical in implementing training reform at the grassroots level. In order to have a positive impact on safety and student pilot growth and to reach the larger pilot community, improved curricula must be implemented for initial pilot training, instructor certification, recurrent training, transition training, and other training categories.

SAFE Issues and Concerns Regarding Pilot Training Reform

SAFE is encouraged by the comments received on the Pilot Training Reform Symposium Preliminary Report and as previously noted, by the related training reform initiatives that are currently underway. In particular, SAFE commends AOPA for its Flight Training Student Retention Initiative, the GAJSC for implementing the Safety Analysis Team, FAA for initiating the knowledge test ARC, and Master Instructors LLC for spearheading the formation of the CFI Professional Accreditation Committee.

Despite our optimism regarding the above efforts, however, SAFE has ongoing concerns regarding efforts to institute pilot training reforms as a means to improve the fatal accident rate and increase student pilot starts, retention, and completions. All organizations involved in this effort need to recognize and address the following issues in order for reform efforts to succeed:

1. *Relationship of pilot training reform to general aviation safety* – This concern was best expressed by Dale Klapmeier, Cirrus CEO, at the 2011 AOPA Summit in Hartford, CT. Klapmeier stated that general aviation's poor safety record inhibits future industry growth and cited the "fear factor" among potential Cirrus prospects. He connected this to pilot training by asserting, "we're still training pilots to fly aircraft that no longer exist." This theme must be explicitly recognized by all parties engaging in pilot training reform and

that training reform should be a key element in improving the general aviation fatal accident rate. SAFE also believes that the current safety record may be acceptable to some participants within our community, but it is <u>not</u> acceptable to prospective participants in the public at large. A critical step in pinpointing these linkages would be to conduct more effective root cause analyses of general aviation fatal accidents.

2. *Leadership and coordination of pilot training reform* – While SAFE is encouraged by the individual efforts of organizations toward training reform, a greater collaborative effort is needed to coordinate industry and FAA efforts now and into the future. The GAJSC was initially established to coordinate industry and FAA general aviation safety efforts, and this body could play a central role in training reform. But to do this, the GAJSC would need to exert more proactive "safety leadership" and consider less conventional analytical tools and remedial approaches. Its charter, however, addresses only safety related activities rather than other industry growth issues.

3. *Reaching the existing pilot population to improve safety* – SAFE firmly believes in the importance of training reform in reaching new general aviation participants. But we also believe that reform must reach the current pilot population—especially the aviation educator community—in order to address pressing general aviation safety issues. Accordingly, industry and FAA efforts must emphasize training reforms that improve instructor certification/recertification, the flight review, transition training, and other training requirements for existing pilots. Such reforms should emphasize risk management, scenario-based training, and other techniques to increase their effectiveness.

4. *Importance of tactical (i.e., grassroots) implementation efforts* – Pilot training reform will only be fully effective if it is instilled as part of a new general aviation safety culture that is embraced and implemented by all instructors, pilot schools, and training centers. Such changes cannot occur overnight, and this evolution needs to be encouraged by the collective leadership of the aviation community, including the FAA.

<u>Next Steps in Pilot Training Reform</u>

To ensure continued collaboration and progress on pilot training reform, it is desirable for the aviation community to establish benchmarks against which progress can be measured. This can be best accomplished if industry and FAA stakeholders will mutually agree on the path for training reform, how it will be integrated in joint safety and industry growth agendas, and how it will be managed. Entities such as the GAJSC may be appropriate to manage the safety portion of this effort, but industry growth elements may require a separate coordination effort. SAFE intends to maintain its leadership role in pilot training reform and will aggressively promote

proactive industry and FAA approaches that will reduce fatal accidents and stimulate student pilot starts and retention.

SAFE has not planned for a follow-on training reform symposium at this time. However, SAFE will continue in its roles as a visible and vocal advocate for training reform and community watchdog monitoring training reform progress. We will continue to highlight progress, or lack thereof, on the six training reform projects outlined by SAFE. At a minimum, SAFE will issue another progress report in 2012. In the meantime, current stakeholders are encouraged to press on with their individual and joint initiatives. Stakeholders who have heretofore chosen not to embrace or to engage in the reform process need now to commit to this effort in a meaningful way. And anyone else who is interested in becoming involved in reform efforts is encouraged to contact SAFE or any one of the other symposium stakeholder-participants.

For more information: www.PilotTrainingReform.org, www.SafePilots.org

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