

AEROBATIC COMPETENCY EVALUATION PROGRAM: HOW WE GOT HERE

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In his autobiography, Air Show Hall of Fame member Duane Cole wrote, "In 1946, the CAA [Civil Aeronautics Authority, the Federal Aviation Administration's predecessor organization] didn't require a waiver of regulation to put on an air meet [air show]. The only requirements were a letter notifying them of the event and observing of some loosely written rules. To say the rules were inadequate would be an understatement."

This very loose regulatory situation continued until the September 1951 when an Air National Guard AT-6 crashed into the crowd at an air show in Flagler, Colorado, resulting in the death of 19 spectators and the pilot.

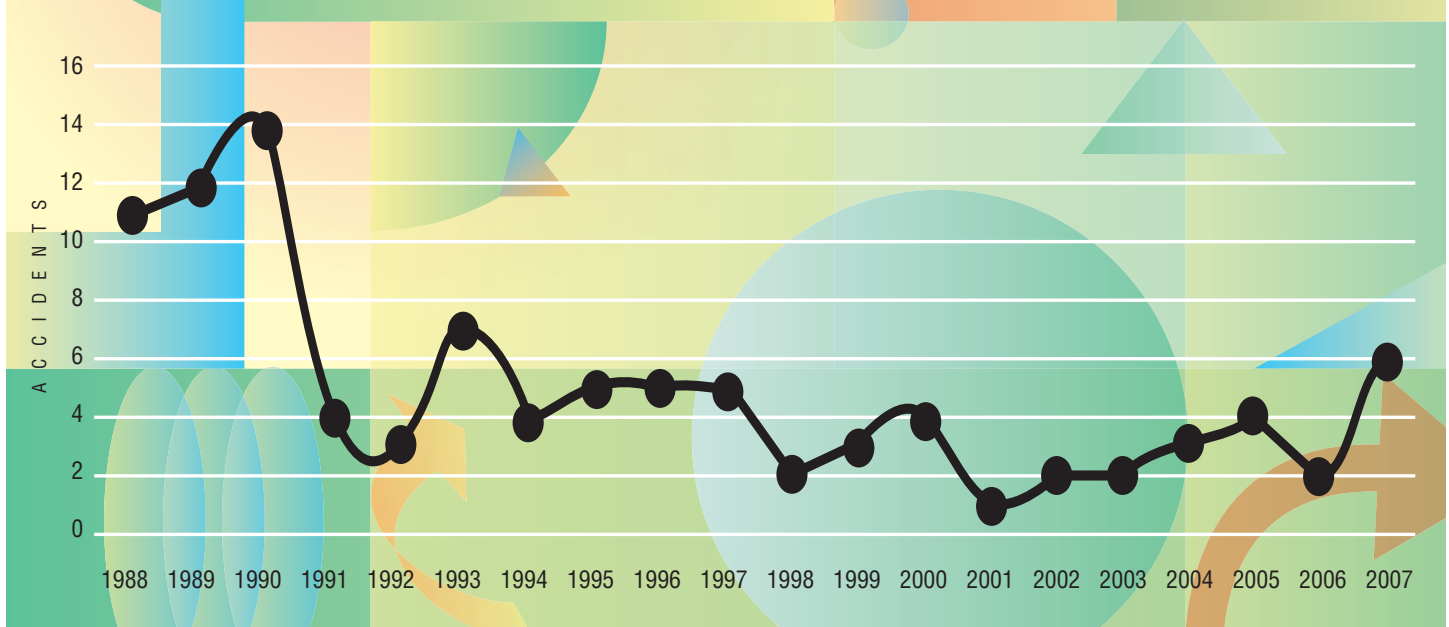
An Industry on the Precipice

The political fall out from the Flagler incident was serious. All air shows were cancelled and the future of the industry was in jeopardy. As the industry struggled to sur-

vive, Cole testified before CAA investigators and Congress, ultimately convincing them that air shows could be continued with regulatory changes that would assure spectator safety. Shortly thereafter, industry professionals working with federal regulators established the skeleton of the program under which U.S. air shows have been conducted ever since: minimum set back distances for different types of aircraft and a sterile aerobatic box. Since those guidelines were developed, no spectator has been killed by an aircraft performing at a U.S. air show.

But, even with the establishment of those rules, the creation of the Federal Aviation Administration (FAA) in 1958 and the consolidation of authority on all domestic aviation issues, federal regulators paid very little attention to air shows. ICAS member and long-time air show performer Walt Pierce remembers that when he flew his first air show in 1963, the only documentation you needed as a performer was a copy of the waiver from your last show. The re-

Chart 1. Fatal Air Show Accidents, Pilots, Military and Civilian, North America, 1988-2007



quirement for your first show? Walt is hazy on this one, but thinks all that was required was the endorsement by an established aerobatic pilot.

But by the mid-1960s, the evaluation of a pilot's aerobatic competency had become more formal and was conducted by the local Flight Standards District Offices (FSDO) where an inspector would evaluate a potential or renewing air show performer. This system worked well while the FAA had a cadre of experienced pilot/inspectors that were familiar with aerobatics, but as FAA inspectors with aerobatic expertise began to retire, the in-house expertise in aerobatics left with them. As a result, in many cases, FAA inspectors with no aerobatic training were assessing the aerobatic competence of prospective air show pilots.

In 1977, Bernie Geier, then manager of the FAA's General Aviation and Commercial Division, recognized that the FAA lacked the in-house expertise to evaluate aerobatic pilots and suggested the first evolution of

the Aerobatic Competency Evaluation (ACE) program. In this early program, the ACE was a pilot, usually an active air show performer, who assumed the responsibility of advising the local FSDO as to the competency of aspiring and renewing aerobatic performers. But the program was voluntary, there were no established standards or procedures for conducting evaluations, and individual inspectors were still permitted to issue Statement of Aerobatic Competency (SAC) cards without consulting with an established air show performer.

Desperate Times, Dramatic Measures

Over time, this lack of qualified evaluators began to have consequences. By the late 1980s, the air show industry was suffering through a large number of accidents each year. A demonstrable cause/effect relationship was never established, but there were strong indications that the annual aerobatic evaluations were not rigorous enough and were not being conducted by the right people. Nearly a dozen air show pilots were dying in accidents at air shows every year and the FAA was on the verge of shutting the whole system down. During the 1990 air show season, the industry suffered through 14 fatal accidents at air shows. As one highly placed FAA manager said, "[It] seems like every Monday morning, CNN brings news of another air show fatality."

In October of 1990, Roger Baker, the FAA's National Air Show Coordinator said,

"It's a serious situation and we have to deal with it seriously. Unfortunately, if the industry is not able to deal with it, we (the FAA) are going to put in some kind of 'fix' that will not be very popular...because we are going to be talking about altitude restrictions, speed restrictions and that kind of thing."

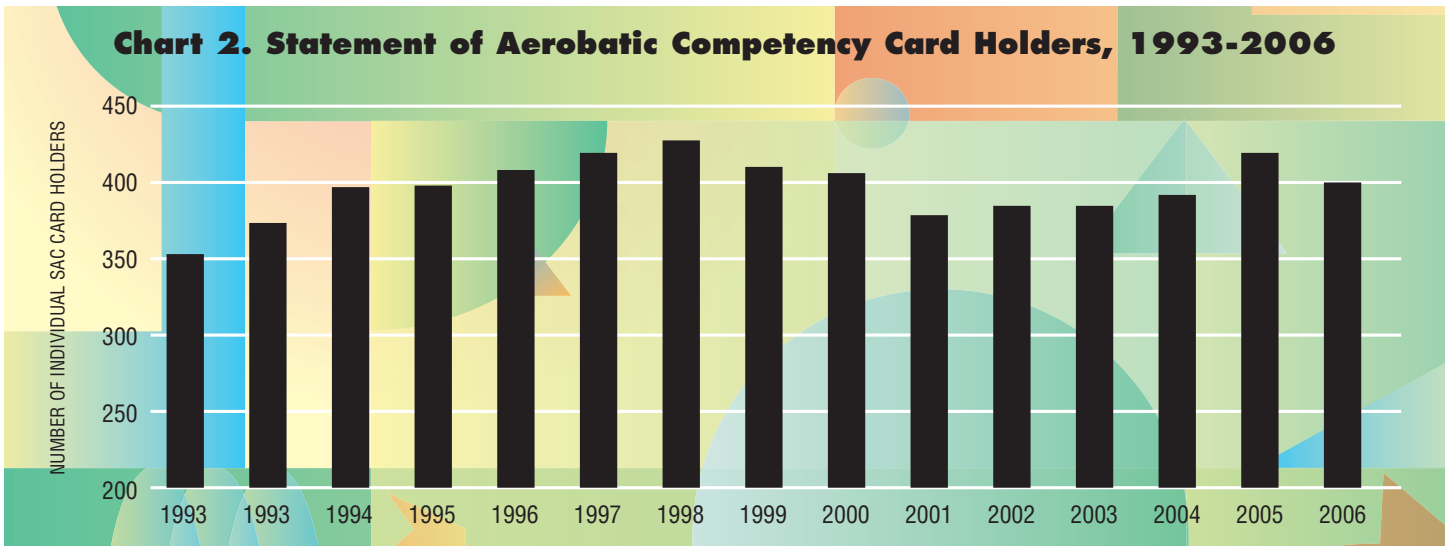
So, in the winter of 1990-91, in a genuinely groundbreaking government/association partnership, the FAA designated ICAS and its more experienced pilots as the "peer reviewers." Beginning in the spring of 1991, every pilot would be obligated to be evaluated each year by an experienced air show pilot who would be able to distinguish good from bad, dangerous from safe. ICAS also assumed most of the administrative responsibilities for the ACE program.

In the first year that ICAS ran the program, air show accidents were cut in half (see Chart 1). In subsequent years, the number of accidents dropped dramatically again. And, since 1993, the ACE program has helped maintain that lower accident rate. During the last three years that the FAA ran the program on its own in 1988, 1989 and 1990, there were an average of twelve accidents per year. From 1996 through 2006, there was an average of just 2.5 fatal air show accidents each year. During that same period, aircraft designs changed and other developments contributed to the dramatic decrease in fatal air show accidents, but most industry professionals agree that the single biggest cause of

ICAS ACE Committee

Chairman Gregory Poe, Boise, Idaho
 Eddie Andreini, Half Moon Bay, California
 Bob Carlton, Albuquerque, New Mexico
 Bud Granley, Bellevue, Washington
 Wayne Handley, Groveland, California
 Scott Lesh, Nevillewood, Pennsylvania
 Major Mark Proulx, Hill AFB, Utah

Chart 2. Statement of Aerobatic Competency Card Holders, 1993-2006



ICAS Aerobatic Competency Evaluators

Eddie Andreini, Half Moon Bay, California
 Curt Arnsperger, Gahanna, Ohio
 Bob Bishop, Tucson, Arizona
 Ed Bowes, Lincoln, Nebraska
 Richard Brand, Henderson, Nevada
 Fred Cabanas, Key West, Florida
 Bill Carter, St. Albert, Alberta
 Matt Chapman, Kennett Square, Pennsylvania
 Bill Cherwin, Crystal Lake, Illinois
 Jan Collmer, Dallas, Texas
 John Collver, Lomita, California
 Bill Cornick, Thousand Oaks, California
 Dave Dacy, Harvard, Illinois
 Dan Dameo, Bridgewater, New Jersey
 Bob Davis, Lake Geneva, Wisconsin
 Stewart Dawson, Galveston, Texas
 John Ellis, Columbia, Missouri
 Paul Entekin, Pensacola, Florida
 Bill Finagin, Annapolis, Maryland
 Ken Fowler, Rocky Mountain House, Alberta
 Debbie Gary, Friendswood, Texas
 Michael Goulian, Maynard, Massachusetts
 Bud Granley, Bellevue, Washington
 Keoki Gray, Fernandina Beach, Florida
 Steve Gustafson, Birmingham, Alabama
 Ed Hamill, Goodyear, Arizona
 Wayne Handley, Groveland, California
 Rob Harrison, Claremont, California
 Randy Henderson, Frisco, Texas
 Alan Henley, Birmingham, Alabama
 William Hunsaker, Grand Junction, Colorado
 Charles Jirik, Dallas, Texas
 John Kehoe, Ocala, Florida
 Michael Kennedy, Lebanon, Tennessee
 Terry Klingele, Belleville, Illinois
 Greg Koontz, Ashville, Alabama
 Charles Krueger, Conesus, New York
 Lee Lauderback, Kissimmee, Florida

Vlado Lenoach, Countryside, Illinois
 Scott Lesh, Nevillewood, Pennsylvania
 Walt Linscott, Alpharetta, Georgia
 Bill Lumley, Delray Beach, Florida
 Dan McClung, Arley, Alabama
 Dan McCue, York, Maine
 John Mohr, Vadnais Heights, Minnesota
 Paul Pitch Molnar, St. Catharines, Ontario
 John Mrazek, North Vancouver, British Columbia
 Jim Mynning, Chelsea, Michigan
 Howard Pardue, Breckenridge, Texas
 James Parker, Warren, Vermont
 Carl Pascarell, Jacksonville, Florida
 Olin Pash, Harlan, Iowa
 Mark Pfeifler, Little Elm, Texas
 Warren Pietsch, Minot, North Dakota
 Kent Pietsch, Burlington, North Dakota
 Gregory Poe, Boise, Idaho
 Vernon Ricks, Greenwood, Mississippi
 Debbie Rihn-Harvey, La Porte, Texas
 Jim Roberts, Chicago, Illinois
 Ryland Roetman, Arley, Alabama
 Frank Ryder, Metairie, Louisiana
 Larry Schlasinger, Chetek, Wisconsin
 William Segalla, Canaan, Connecticut
 Greg Shelton, Collinsville, Oklahoma
 Harry Shepard, St. Augustine, Florida
 Ed Shipley, Malvern, Pennsylvania
 Dale Snodgrass, St. Augustine, Florida
 Gene Soucy, League City, Texas
 Sean Tucker, Salinas, California
 Bob Wagner, West Milton, Ohio
 Patty Wagstaff, St. Augustine, Florida
 Tim Weber, Phoenix, Arizona
 Kirk Wicker, Bristow, Virginia
 Bill Witt, Ennis, Montana
 Tom Womack, Kansas City, Missouri
 Richard Yersak, Doylestown, Pennsylvania

this decrease has been the ICAS administration of the ACE program.

Controversial from the Beginning

The ICAS ACE Program has not been without controversy and problems. Indeed, many pilots performing today were dead-set against the idea of ICAS stepping into this quasi-government role when the idea was initially proposed in the fall of 1990. During the 1990 ICAS Convention at the Riviera Hotel in Las Vegas, the ICAS leadership faced a largely hostile audience as they explained to air show pilots the proposal under which ICAS would assume responsibility for administering the ACE program.

At the time, guidelines for the program were still being developed. It was not yet clear who would serve as Aerobatic Competency Evaluators (ACEs) and how the first ACEs would be selected. Many pilots were concerned that the program would be used to discourage newcomers from becoming involved in the business. Others were angry that pilots would be obligated to pay ICAS for a service that they had previously received at no cost from the FAA.

Rumblings about ICAS administration of the program persisted for more than ten years as ICAS faced and solved a nearly constant stream of problems and challenges. Over time, though, many of the initial concerns proved to be unwarranted. Objective criteria for who was qualified to serve as an ACE were developed. The rules were developed, amended, reconsidered and amended again many times during the first ten years that ICAS administered the program. ICAS authority was never used to discourage newcomers or less active air show performers. Indeed, the number of air show per-

Recent ACE Committee Activities

- development of safety guidelines for ribbon cutting
- development of safety guidelines for squirrel cages
- development of safety guidelines for density altitude
- development of jet practical evaluation guidelines
- development of wing walking practical evaluation guidelines
- development of incident/accident investigation procedures
- clarification of ambiguous terms and general re-write of the ICAS ACE Manual
- development and implementation of new Statement of Aerobatic Competency card renewal procedures
- consideration of numerous exemption requests
- review of applications by air show pilots to become Aerobatic Competency Evaluators
- development of helicopter operations/procedures at air shows
- standardization for procedures for issuing cards to former military demonstration pilots
- standardization of pyro operations/procedures as they affect performing pilots
- review, analysis and recommendations on change to pilot-related issues of FAA Chapter 49
- rewriting the SAC definitions and endorsements in Chapter 31
- development of the education/continuing education of ACEs syllabus;
- development of the density altitude safety guideline
- development of course material for annual ICAS Pilot Safety De-Brief meeting at ICAS Convention

formers has held relatively steady since ICAS assumed responsibility for administering the ACE program (see Chart 2).

Then vs. Now

Mike Goulian, then a national aerobatic champion, relates his experience of joining the ranks of air show performers just before the transition to the ICAS ACE Program. “It was 1989 and I needed to get my low altitude card. We managed to get my home airport closed for 15 minutes and I went out and flew my air show routine for the FAA, having never flown low level aerobatics. I didn’t know squat about flying air shows, but I didn’t kill myself, so I got the card.”

Goulian started flying air shows and readily admits that he was, “on my own.” He credits luck and more than a small amount of fear as enabling him to survive his first shows. As he flew more air shows, it was people like Sean Tucker and Patty Wagstaff who became his mentors.

Mike Goulian has gone on to become one of our industry’s stars and served as chairman of the ICAS ACE Committee in the late 1990s. It was during his tenure as ACE Chair that Ed Robinson, the FAA National Air Show Coordinator, insisted on the establishment of a set of formal standards for evaluating pilots as they lowered their altitude restrictions from 800 feet to 500 feet to 250 feet to the surface.

Mike believes that the biggest advantage of the current ACE program over what he experienced in the early nineties is that the ACEs have become mentors to aspiring performers. The guidance and example set by the ACE may be one of the program’s greatest accomplishments and most significant contributions to air show safety.

Those Who Ignore History...

If the Aerobatic Competency Evaluator is the key to this program’s success, who is the ACE and how are they selected?

Greg Poe, the current Chair of the ACE Committee and an ACE for over ten years, outlined what the committee is looking for in a new ACE.

“Time in the industry, experience, wisdom, active aerobatic pilot and a strong reputation for integrity, are the starting points,” Poe said. The ACE candidate needs the written endorsement of active ACEs and, in addition, there are regional considerations to ensure the ACEs are available throughout North America. “This ensures that the cost to the aspiring performers is

controlled,” Poe added.

When asked about resentment from individual performers about the ACE Committees’ actions, Poe said that there was some, but that, “Most performers are in the business for the long term and are serious about protecting themselves and the industry. They accept the value of keeping air shows safe.”

Poe was very clear about how, “proud I am of the ACE Committee. This group of volunteers has and will continue to confront issues that impact air show and performer safety to ensure, air shows are entertaining and safe, not reckless,” he said.

Poe also mentioned the need to establish a “new culture” within both the ACE organization and the air show industry as a whole. This new culture recognizes that our industry walks, “a thin line in keeping the crowd and pilots safe and ensuring the entertainment value of the industry.” He emphasized that every ACE and every air show performer is responsible for doing everything possible to ensure that the whole business stays on the right side of that thin line.

In 1951, with the continued existence of the air show business at risk, Duane Cole went to Capitol Hill with other air show industry representatives and committed the air show community to a new level of safety...a commitment that the industry met, a commitment that almost certainly saved the air show business. Almost exactly forty years later, following a rash of fatal air show accidents, ICAS responded to threats of dramatic and debilitating changes to air show regulations by taking on self-policing responsibilities on behalf of the entire air show community.

Poe — and many other leaders within the air show community — would like to avoid another make-or-break regulatory showdown. He believes that the next phase of self-policing should begin before the federal government threatens to do something dramatic. “During the next few months, we’re looking to create a small, but important shift in the overall air show culture that encourages and promotes risk mitigation and reduction,” Poe said.

The ICAS Aerobatic Competency Evaluation Program, born of necessity in a time of industry crisis, continues a proactive role in the evolution of the air show business. It has not been without controversy, sometimes met with hostility, but always trying to balance the goal of a safer and more entertaining air show industry. †