

BY MARK LACAGNINA | FROM ORLANDO

Seminar focuses on strategies to further improve a good safety record.

# DEDICATION

*in tough times*

In these tough economic times, it is good to see that a lot of people are still very dedicated to safety,” said William R. Voss, president and CEO of Flight Safety Foundation (FSF), welcoming the 300 aviation professionals who attended the 54th annual Corporate Aviation Safety Seminar (CASS) in Orlando, Florida, U.S., April 21–23.

Noting other issues challenging corporate aviation, Ed Bolen, president and CEO of the National Business Aviation Association (NBAA), co-presenter of the seminar, said, “We have been pilloried as being excessive, but one thing has never been questioned about business aviation: our safety record.”

Reviewing recent accident investigations, Deborah Hersman, a U.S. National Transportation Safety Board member recently nominated to become NTSB chairman, pointed to a “long-standing safety issue” — fatigue. “This is an industry in which people are pushed and work tough schedules,” she said. “I am happy to see that several of those in attendance here have voluntarily instituted SMS [safety management system] programs incorporating fatigue risk management.”

Dr. Carol Ash, medical director of Sleep for Life at Somerset Medical Center, said, “Some say that sleep is only for wimps. Well, nothing can be further from the truth. Sleep, like oxygen, is a physiological need. We have the skills to perform satisfactorily in normal conditions when fatigued. It is when critical thinking is required that you will fail.” Ash discussed fatigue countermeasures and noted that there are 84 types of sleep disorders. “Someone in this room probably has a sleep disorder and doesn’t know it,” she said.

A common sleep disorder, sleep apnea, has a direct effect on cognition,

said Dr. Quay Snyder, president and CEO of Virtual Flight Surgeons, who discussed the many causes of cognitive impairment that can affect “the failing aviator” — a pilot with fading ability to fly proficiently and to complete training and check rides satisfactorily. Noting that “very few pilots self-report — that is, come in and say, ‘I can’t hack it anymore,’” Snyder discussed methods of identifying and helping failing aviators.

Earl Weener, a Foundation fellow, briefed the CASS participants on the FSF Runway Safety Initiative. He presented data showing that four of the 12 major accidents worldwide last year involving aircraft typically used in corporate aviation were runway excursions, with three occurring on takeoff.

Weener said that from 1995 through 2008, long touchdowns were involved in about one-third of the corporate aircraft excursion accidents. “Unstable approaches characterize most of the landing excursions,” he said.

### **Freedom, Safety in Jeopardy**

David Rimmer, executive vice president of ExelAire, and Kenneth P. Quinn, FSF general counsel and secretary, and a partner in the law firm Pillsbury, discussed the growing threat of aviation accident criminalization.

Rimmer was a passenger aboard the Embraer Legacy that collided with the Boeing 737 over the Amazon in September 2006 (ASW, 2/09, p. 11). He was subsequently detained and questioned by Brazilian police. Noting that several Brazilian congressional investigations also were launched after the accident, Rimmer said, “Politicians and prosecutors react to public outcries for ‘justice.’ Everyone feels that someone has to pay. ... Criminalization threatens all of us. It threatens our freedom.

And by interfering with the gathering of facts, criminalization threatens everyone’s safety.”

Rimmer and Quinn both said they were surprised by the absence of support by the U.S. government. “I was taken aback by how little the U.S. government did to intercede in the behalf of the pilots,” said Quinn.

Quinn reviewed several criminal investigations launched in the wake of aviation accidents. Noting that everyone in a company can be involved in a criminal investigation, he provided advice on what to do if criminal charges are imposed. Hiring experienced counsel for everyone involved was near the top of the list. Quinn also cautioned that “in the first 72 hours, admissions can be made and stupid things can be done.” The worst thing is destroying documents or erasing tapes. “You put in jeopardy the company and its affected employees when you destroy records,” he said.

In a related presentation, D. Richard Meikle, vice president of safety for NetJets, discussed early perceptions about accidents. “People in your company and outside are going to form initial perceptions about what caused an accident very quickly,” he said. “Initial perceptions are rarely accurate.” Meikle recommended that company managers be prepared to gather and use factual information to manage perceptions. “If you don’t tell people what might have happened, they will make it up.”

### **In Tune With Technology**

Briefings on the automatic dependent surveillance–broadcast (ADS-B) system were presented by Steve Brown, ADS-B co-chair of the U.S. Federal Aviation Administration (FAA) Aviation Regulatory Advisory Committee and senior

vice president of operations for NBAA; David Bjellos, aviation manager for Florida Crystals Corp.; Rick Ridenour Sr., technical staff engineer/pilot for the FAA; and Pat Zelechowski, FAA ADS-B team leader.

Brown said that ADS-B is a “mature technology based on a better transponder ... with a discrete code for each aircraft” that will improve aircraft-positioning capabilities and provide the means for cockpit display of traffic and weather information. “Initial implementation in the U.S. has been with UPS and operators in Alaska,” he said. “Several other countries have demonstration programs under way.”

Zelechowski noted that the system will enable air traffic control surveillance services to be provided in non-radar areas such as the Gulf of Mexico. The FAA currently is drafting ADS-B equipment requirements. “Where a transponder is required today, you will need ADS-B equipment,” he said. “Cockpit displays will not be required, but most operators will want them.”

“Although the system is being developed primarily for the airlines and commercial operators, corporate/business aviation will get some trickle-down benefits,” said Bjellos. Examples: “ADS-B will provide separation all the way down to the runway, [and] weather information will be available in areas where it is not available today.”

Expanding the discussion of equipment requirements, Ridenour said that electronic flight bags initially will be used for cockpit display of traffic information (CDTI) but that navigation and flight displays eventually will be used to display the information. “TCAS [traffic-alert and collision avoidance system] will continue, but CDTI will provide better

accuracy and direction-of-travel information,” he said.

Richard Fosnot, senior manager of aviation safety for Jeppesen, discussed the progress of performance-based navigation from the development of area navigation routes in the 1970s to today’s required navigation performance (RNP) approach procedures, of which 144 have been approved worldwide. “RNP provides vertical navigation capability and lower minimums at airports without ILS [instrument landing system] approaches,” he said.

The integration of unmanned aircraft systems (UASs) in the U.S. National Airspace System was discussed by Ardyth Williams, the FAA’s UAS air traffic manager. “There are hundreds of them flying right now, and there will be more,” she said. All of them must be operated according to Federal Aviation Regulations and are prohibited from being flown in Class B airspace and over populated areas.

Williams said that the FAA is working with other organizations on a TCAS-like sense-and-avoid system. “One problem is that, right now, none can meet performance requirements for an avoidance maneuver,” she said. “Most cannot do half-standard-rate turns.”

### **Safety Management**

Several presentations explored the various elements of safety management systems. SMS audits, mostly of air taxi operators, have shown that acquiring the resources and expertise to establish an internal evaluation program and to develop an adequate SMS manual are the greatest challenges in implementing an effective SMS, said Steve Witowski, aviation safety program manager for the Aviation Research Group/U.S. “The SMS manual does not have to be the

*Gutenberg Bible*,” he said. “It must be simple and direct.”

Witowski and Richard Bucknell, CEO of Southpac Aerospace, stressed the need for SMS training. “It does no good to have a ‘paper’ system that no one else knows about,” Bucknell said. “People have to understand what you want them to do and where you want them to go. Without that, there’s no buy-in.” Bucknell focused on management’s role in creating the company’s safety culture. “Management needs to pull out the compass and say, ‘This is the way we are going.’”

Management also must manage the company’s “safety climate” to shape its safety culture, said Kenneth Neubauer, technical director of aerospace safety for Futron Corp. He described safety climate as the perceived state of safety at a particular time. “Unlike safety culture, which is very difficult to change, the safety climate changes regularly.” Neubauer presented a four-step process for measuring and managing the company’s safety climate. “The most difficult step involves taking actions and communicating them to staff,” he said.

Gary Cooke, safety officer for CVS/Caremark, discussed the implementation of effective crew resource management (CRM) programs in small corporate aviation departments. “The key to having a good CRM program is strong leadership that supports the program and ensures that everyone understands what is expected of them,” Cooke said. “CRM training should be conducted annually, but under the current stresses of the economic downturn that affect how well staff and crewmembers interact with one another, you might consider doing it twice or three times a year.”