Aviation Human Factors Industry News

From the sands of Kitty Hawk, the tradition lives on.

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In this weeks edition of *Aviation Human Factors Industry News* you will read the following stories:

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NTSB challenges FAA for access to incident reports

Agencies Spar Over Air Safety Data

The Federal Aviation Administration is locked in a dispute with accident over a sensitive safety issue: Who should have access to data that airlines voluntarily provide to the government?

The clash stems from a recent National Transportation Safety Board effort to obtain data from the FAA about safety lapses over the years by various U.S. airlines, according to government and airline industry officials.

Board investigators requested the data as part of their investigation of an American Airlines Boeing 757 that ran off the end of a runway last December in Jackson Hole, Wyo...., according to these officials.

Such industry-wide information, based on voluntary reports from airlines and pilots about runway incidents, traditionally has been off-limits to the safety board. But now, as part of the board's broader push to identify safety hazards, it wants the right to review large volumes of voluntary incident reports from years past.

FAA and industry officials fear that by making some of the confidential information public, the board could end up chilling voluntary reports—and, potentially, eroding overall safety as a result.

FAA officials rejected the board's request on those grounds, and referred the issue to a group of labor, industry and government experts.

Over the years, airlines and pilots have voluntarily turned over extensive details about thousands of potentially hazardous incidents, based on promises that the FAA would keep the data confidential. The information, typically, hasn't been used against carriers or to punish pilots.

The FAA has worked to fine-tune the voluntary data-sharing system, partly by building trust through strict controls on distribution of the information. Without such restrictions and safeguards, according to industry and FAA officials, the flow of voluntary data could dry up.

NTSB officials, over the years, have made some preliminary requests for confidential data, though they never sought to escalate the argument after being turned down by the FAA.

But recently, as part of the safety board's expanded focus, it has sought to insert itself into the information-sharing network. The board, for example, has demanded unfettered access to certain data under the purview of a high-level team of experts.

Marion Blakey, a former head of both the FAA and the NTSB, said Sunday that any plan to turn over such data to the safety board "should proceed with extreme care."

Although the board "has a terrific track record treating data with a high degree of confidentiality," Ms. Blakey said, the FAA should give NTSB investigators safety summaries "rather than actually placing data in another place" controlled by a different agency.

A board spokesman last week confirmed requesting information to "explore a safety issue pertaining to runway overrun events such as the one that occurred at Jackson Hole." An FAA spokeswoman declined to comment.

The dispute is part of a growing turf battle between the two agencies that was highlighted in December when Deborah Hersman, the safety board's chairman, sketched out plans to expand the NTSB beyond its core mission of investigating accidents.

With U.S. airline accident rates at historically low levels, the board now handles significantly fewer domestic airliner crashes than in the past.

For the board to stay relevant, it will begin analyzing and combating safety threats, Ms. Hersman said. Its goal is to begin issuing safety recommendations designed to prevent those threats from resulting in fatalities.

Earlier this month, FAA officials countered that the board's authority doesn't extend to identifying or trying to deal with potential hazards. That job, according to these officials, is reserved solely for the FAA as part of its regulatory mandate.

Some current and former FAA officials said that board officials should be required to sign the same non-disclosure pledges as company and union officials.

NASA and FAA will plan to plan better human factors coordination

Presented last summer with a Government Accountability Office report critical of the short shrift human factors considerations have received in a multi-billion dollar air traffic modernization effort, the Federal Aviation Administration and NASA have responded with a plan that calls for the agencies to plan to cooperate more closely. The GAO found that more attention to human factors in the NextGen program--the at least $40 billion program to shift national airspace system onto a satellite signal base--could have helped avoid some schedule overruns and cost increases, adding that NASA and the FAA needed a method to improve cross-agency coordination on human factors research and development.

In a document dated Feb. 28, FAA and NASA say they will, over the course of the next year, "work together to identify the policies, programs, budgets, personnel actions and partnerships necessary to do this."

Starting immediately, the two agencies will meet "at least annually" to jointly review their planned human factors research.

They will also immediately assess how their research can align to planned mid- and long-term NextGen operational improvements; share best practices; "leverage each other's researcher expertise and facilities;" and the FAA will continue to integrate NASA and other organizations' research into an online list of past, current and planned human factors research, the document states.

Human factors research and development focuses on how people interact with equipment and seeks to minimize the potential for design-induced error.

Auditing drives up airline safety performance

Last year saw the lowest airline accident rate in history, with just one Western-built hull loss accident per 1.6 million flights, according to data from the International Air Transport Association. IATA has also identified a clear disparity in safety performance between airlines that carry out safety audits and those that not.

After four years of industry preparation for the full introduction of the IATA Operational Safety Audit (IOSA), 2009 was the first year in which successful completion of an IOSA and all the associated follow-up procedure became a condition of IATA membership.

From 2009 to 2010 there was a dramatic improvement in IATA member airlines' performance as measured by the accident rate: the 234 IATA member carriers improved their average Western-built jet hull loss rate from 0.62 losses per million flights in 2009 to 0.25 in 2010. That also represents a considerable advance on the membership's previous best rate achieved in 2005 (see graph). Meanwhile, the world average Western-built jet hull loss rate for 2010 also reached a best-ever figure of 0.61 losses per million flights. Some 120 non-IATA carriers have also elected to undergo an IOSA, and some countries - such as Nigeria - have elected to make the issue or renewal of an operator's certificate conditional on the airline passing an IOSA.

There is still a considerable disparity between safety performance in different world regions (see global map), however, with North America best at a rate of 0.1 hull losses per million flights, and Africa worst at 7.41. Africa's 2010 performance did improve from a rate of 9.94 the previous year.

IATA's director general Giovanni Bisignani says: "Flying must become equally safe in all parts of the world. An accident rate in Africa that is over 12 times the global average is not acceptable. Improvements can happen. IATA's African carriers performed significantly better than non-IATA airlines in the region. I encourage all governments in the region to make use of the IOSA tool to boost the region's performance."

Last year, says IATA, the accident rate of IOSA carriers in Africa for all aircraft types was more than 50% better than non-IOSA airlines.

OSHA timeline highlights 40 years of healthier workers, safer workplaces and a stronger America

An interactive timeline commemorating 40 years of progress protecting the safety and health of working men and women illustrates milestones from the Occupational Safety and Health Administration and its state partners' efforts to reduce injuries, illnesses and deaths.

The Occupational Safety and Health Act was signed into law by President Nixon on Dec. 29, 1970. On April 28, 1971, the Occupational Safety and Health Administration was created. In the four decades since OSHA was created, the nation has made dramatic progress in reducing work related deaths and injures.

"We hope you will join us in this anniversary year as we recognize OSHA's accomplishments and reaffirm our dedication to the agency's mission," said Assistant Secretary of Labor for Occupational Safety and Health Dr. David Michael's.
 "Help us celebrate four decades of healthier workers, safer workplaces, and a stronger America."

OSHA invites the public to visit the timeline and explore 40 years of progress in workplace health and safety. Visit the OSHA at 40 Web page to read Assistant Secretary Michael's' Anniversary Message about OSHA's journey during the past 40 years and priorities for the future, and learn about activities throughout the year to celebrate OSHA's accomplishments.

Under the Occupational Safety and Health Act of 1970, employers are responsible for providing safe and healthful workplaces for their employees. OSHA's role is to assure these conditions for America's working men and women by setting and enforcing standards, and providing training, education and assistance.

For more information, visit http://www.osha.gov.

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Human, mechanical errors both affect plane safety

Human error causes between 70 and 80 percent of airplane crashes, according to an aviation technology professor, and could have been a factor in two Purdue students' plane crash as there were no mechanical issues involved. Tom Williams, senior in the College of Liberal Arts, and Tony Cole, senior in the College of Technology, took off from Purdue airport on Tuesday and planned to fly around the Lafayette area.

The plane crashed Tuesday evening nose down in northeast Tippecanoe County. According to Elwain Dryer, owner of the plane Cole and Williams were using, the Federal Aviation Administration has investigated the crash and concluded no mechanical issues were involved. John Young, professor of aviation technology, explained that human error in plane crashes could involve anything from flight crews to maintenance.

"The aircraft has been designed to be very reliable so there aren't many crises where there are equipment failures," Young said. "There are still some, but not like it was 50, 60 or 70 years ago." The plane, a Taylorcraft DC0-65, was built in 1942.

Ronda Cassens, lecturer with the department of aviation technology, is the head of a safety program that requires all students within the major to meet with her every two weeks to talk about safety. During these meetings, Cassens speaks with students about decision-making, professionalism and safer traffic patterns, among other things.

Cassens said it's hard to say whether or not human error was a factor in Tuesday's plane crash. Despite Dryer's statement that the FAA said no mechanical issues were involved, Cassens said that might not be fully true.

"I know of someone, personally, who had a problem with their fuel but it didn't show up when (the FAA) did the accident investigation," Cassens said. "It'll take the FAA quite some time to figure out what happened."

Young helped develop the first collegiate course on aviation safety after traveling to corporate and training courses and pulling the most important topics for a curriculum. He said all Purdue aviation students go through safety training periodically, in addition to taking a specific class on human errors in flight.

"All of our flight students do take a course in aviation human factors, which has a lot to do with this area," Young said, adding the physiological aspects of flying, such as sight, vision and medication, are looked at for their effects.

Cole was piloting the plane and has a history with flying. He was an aviation technology student for two years and won fifth place at a Safety and Flight Evaluation Conference in 2008 with a Purdue flight team.

It is not clear at this time whether or not human error played into this plane crash. Young said importance is placed on ensuring safe flights.

"From a safety standpoint, we're pretty conservative," he said.

Quick action stops Perth airport crash

Only quick thinking and the skill of Qantas pilots averted what may have been a serious accident at Perth Airport recently when an Airbus A330 with 180 aboard veered to the left just as it was about to lift off. A problem with the rudder is believed to have been the cause of the aborted take-off of the two-year old A330-203. The A330 was doing 180km/h, just seconds from reaching its 220km/h take-off speed on Runway Three when it veered to the left, forcing the crew to abort the take-off and apply maximum braking.

Talbot Henry, who was on the aborted flight to Sydney, said the A330 "nearly went off the runway" and "passengers were thrown forward by the braking".

Smoke poured from the aircraft's brakes which overheated, forcing the plane to remain on the taxi-way for over 45 minutes while fire crews attended. The A330 was towed back to the terminal.

Another passenger, Colin Neathercoat, head of public relations for Bankwest and a former military pilot, said the crew were extremely professional. "The crew handled it well and told us as soon as we exited the runway what the problem was," Mr Neathercoat said.

Another Qantas flight, a Boeing 717, on final approach to land was forced to abort its landing until the A330 left the runway.

Qantas engineers were yesterday still examining the A330 but several mechanics at Perth Airport said they understood that the focus of the investigation was on "uncommanded" rudder movement.

Some passengers did not get away until yesterday morning.

A Qantas spokesman said the aircraft may not fly back to Sydney until today.

IAF lost 40 planes, 16 pilots since 2008

The Indian Air Force (IAF) lost 40 planes and 16 of its pilots in air crashes in the past three years, the Rajya Sabha was told Wednesday.

'During the last three years, from Feb 1, 2008, to Feb 17, 2011, 40 accidents of IAF aircrafts have taken place. In these accidents, 16 pilots, 24 service personnel and five civilians have lost their lives,' Defense Minister A.K. Antony said in a written reply to the upper house during question hour. Antony said every IAF aircraft accident was thoroughly investigated by a court of inquiry to ascertain the cause and remedial measures were taken accordingly to check their recurrence.

Apart from this, the IAF had taken various measures relating to strengthening the aviation safety organization, streamlining of accident and incident reporting procedure, analytical studies and quality audits of the aircraft fleets to identify vulnerable areas and institute remedial measures to reduce aircraft accidents, he said.

'Visit of all flying bases by senior aerospace safety functionaries of the IAF is undertaken to enhance aviation safety. Measures like Operational Risk Management and Crew Resource Management have been implemented to generate a safe flying culture,' he added.

He said the accident prevention programs had given an added thrust to identify risk-prone and hazardous areas specific to the aircraft fleets and operational environment to ensure safe practices and procedures.

To another question, he said that in 2010, the IAF reported 12 air crashes and in these five pilots, 11 armed forces personnel and four civilians were killed.

From Jan 1 to Feb 18 this year, there was one air crash, but no pilot, service personnel or civilian was killed, he added.

A MiG-21 fighter jet had crashed Feb 4 this year, 140 km off Gwalior airfield while en-route to Jamnagar. No casualty was reported in the accident.

Vibrating cockpit seat proposed for pilot alerts

Boeing has floated the possibility of using vibrating cockpit seats as an alternative mechanism to visual and aural indicators on the flightdeck.

Its suggestion is contained in a newly published patent document that details a proposal for a module mounted beneath the pilot's seat which, once triggered, would provide a tactile signal to the crew. While the document mentions various types of alerts requiring immediate pilot action - such as terrain-avoidance or stall-warning alarms - it says there are several other instances during flight where the crew may need to act in a less-urgent manner, to maintain safety.

These include making position reports by voice or datalink or reporting to air traffic control before top-of-descent.

"Certain physiological factors may have an effect on the ability of the flightcrew to remain alert to perform such flight interaction tasks," it says.

It mentions the risks associated with fatigue as well as the requirement for crews to control rest periods during non-critical stages of flight.

"There exists a potential need for a system and method for alerting a flightcrew of the need to perform a task by increasing the level of stimulation that is provided to the flightcrew," it adds, although there is no indication of any immediate plans for application.

The 27 January patent document, whose authors include Boeing chief test pilot Frank Santoni, describes a mechanism comprises two travelling probes capable of vibrating at various amplitudes, frequencies and durations, depending on the nature of the required alert.

This could be pre-programmed to ensure timely intervention at specific points in the flight. But the document also shows that it could be activated, if necessary, by external interaction from air traffic control.

Boeing's document suggests the mechanism may provide overflight prevention capability. The system could also be used to obtain the attention of pilots who are not responding to radio calls.
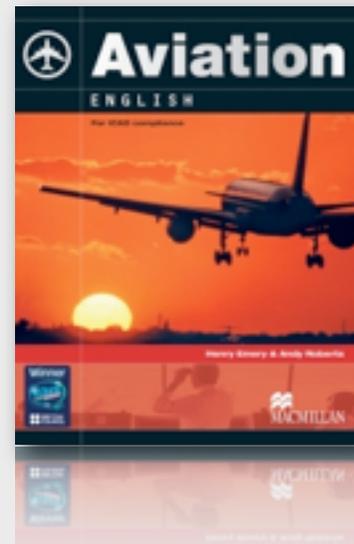
Aviation English

This course is for aviation professionals – particularly pilots and air-traffic controllers – who wish to reach and maintain level 4 (operational) as measured by the ICAO Language Profile descriptors. The course aims to increase and develop the very specific skills described in the ICAO level 4 language profile. These are the skills needed to succeed in any Level 4 assessment and also to function effectively and safely in an aviation environment.

An additional focus is on the language needed to communicate in non-routine and / or emergency situations during flight operations

This course also includes the phraseology that aviation professionals need for communication between pilots and air-traffic controllers, and between pilots and pilots.

The course is intended both for independent study and for classroom use. The 2 included CDs supports the student's book with interactive language and pronunciation exercises, simulations in which the student can participate, and all the audio files from the Student's Book.

http://media.avweb.com/banmanavweb/a.aspx?ZoneID=0&BannerID=3435&AdvertiserID=183&CampaignID=6602&Task=Click&SiteID=19&RandomNumber=789802

Don't Worry About What You Can't Control

If you are like most people you probably spend more time worrying than you should. Worrying about job security, project deadlines, health, shrinking budgets, taxes, the housing market, world poverty, our children's safety, even the weather. Some things we can control, others we clearly cannot. The key to maintaining a positive attitude in life is to know the difference. I heard years ago that 92 percent of the things people worry about are beyond their control.
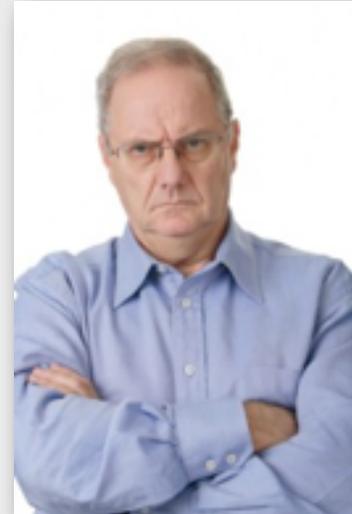
If you are troubled about something you can control, like whether you are going to lose your job, then step up your game. Come in early, stay late, offer to work on a weekend, or volunteer to take on additional responsibilities; do anything you can think of to increase your value. If you end up losing your job, you can bet you'll get a better reference.

If you are concerned about your health, exercise regularly, eat a well-balanced diet, and refrain from smoking.

On the other hand, if you find yourself worrying about something like the safety of your son or daughter serving in the military, whether the government is going to raise taxes, or whether the coming storm will deluge you with rain, understand that there's no action you can take to make any impact on these events or circumstances.

You cannot control these things; worrying about them will just cause stress and affect your overall attitude. In the long term, worrying about what you can't control puts your health, happiness, and longevity at risk.

LTM Challenge

Make a list of the things you worry about. Divide that list into two categories:

1. Concerns you can do something about

2. Concerns beyond your control

Beside each of the items you can control, include an action item. For instance, if you worry about the ten pounds you've recently gained, put together a plan to do something about it. If you're concerned about an impending deadline, make a list of all the things required to get the project completed.

Make a commitment to attack everything within your control and be intentional about not worrying about the things you can't. At first, you'll find it hard not to worry about the things you can't control, but if you use self-discipline and refuse to worry about them, it will become easier.

One of the traits of positive people is that they don't worry about things they can't control.

Safety Management Systems (SMS) Best Practices Survey

The Flight Safety Information, a free service of Curt Lewis & Associates, would like to conduct an informal survey on your "SMS Best Practices". Meaning we would like to collect your anecdotal experience of what does work and what doesn't work with regard to:

· SMS Auditing
· GAP Analysis
· Safety Policy
· Safety Assurance
· Safety Risk Management
· Safety Promotion
· SMS Training
· Implementation SMS
· Culture Change

Thank you.

Send your comments to: smssurvey@fsinfo.org or smssurvey@curt-lewis.com