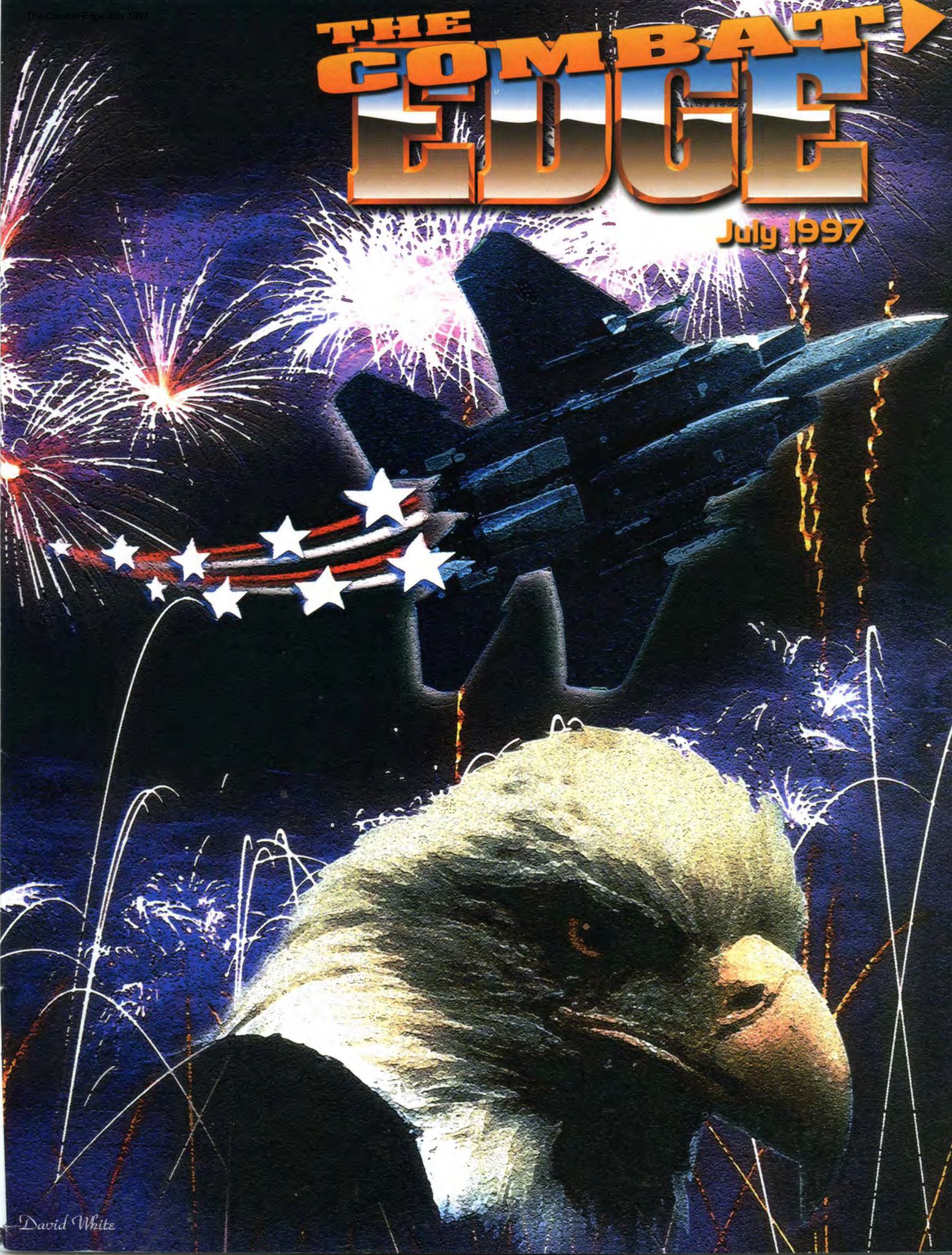


# THE COMBAT EDGE

July 1997



# The Combat Edge

AIR COMBAT COMMAND  
SAFETY MAGAZINE

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© Photo by Kelly

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HQ ACC/SEO  
Langley AFB VA

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HQ ACC/SEF  
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# Accent on Safety

**S**UMMERTIME! Beach'n, Boat'n and Fun in the Sun! At least, that's what summer ought to be. Unfortunately, it's too often been spent cleaning up the aftermath of tragic mishaps. Our boating has been on salvage ships pulling up mangled wreckage, our fishing has been pulling up bodies of drowning victims and, as for fun, chasin' off gila monsters and sidewinders from a smoking hole doesn't begin to compare to what you could be doing down at your favorite beach.

Safety geeks like me spend a lot of time looking at statistics, trying to identify the trends that mark an upswing in the potential for mishaps. Then we try to raise the alarm so that caution will prevail and tragedy might be averted. Unfortunately, we often feel like *Cassandra* on the walls of Troy – our message goes unheeded and soon there are new statistics that other geeks will point to and say, "See, statistics don't lie; you should'a listened." Well, I've looked at the numbers and, frankly, this summer is time to ...

... GET SCARED! I'm writing this in early June and as I look back, the last thirteen weeks have been absolutely horrendous throughout the Air Force. Here's the tally:

FLIGHT – 10 Class A's = 8 destroyed aircraft, 3 extensively damaged, 6 fatalities.  
GROUND – 18 Class A's = 16 fatalities, 2 permanent total disabilities.

Trust me, these are BIG numbers for such a short period of time. And, what's worse, we're just starting what has historically been the worst thirteen week stretch of the year. For instance, last summer, ACC and the gained ARC units suffered 9 aircraft crashes killing thirteen people. IT REALLY IS SCARY, so ...

... GET MAD AND DO SOMETHING ABOUT IT! What? Use the Operational Risk Management (ORM) training you should have recently finished. Why? Because it makes you stop and think before you do whatever it is you're about to do. Work or play, day or night, on duty or off duty, whenever — just run the six step process through your gray matter. If you need, get out an indelible pen and write this on the back of your hand, "*Take no unnecessary risks!*" Read it before you use that hand to turn an ignition key, bring a throttle out of cutoff or before you sign the waiver of liability to go off on a bungee jump. If we can just put the "thinking about it" part before the "doing it" part, then I know we'll be doing less "wishin' we hadn't."

*Ya'll take care, it's a scary world out there ...*

*Colonel Turk Marshall  
Chief of Safety*

Colonel Ronald L. Garhart  
HQ ACC/SEO  
Langley AFB VA



# Ask Orville!

JUST AS A ROAD MAP SYSTEMATICALLY HELPS TRAVELERS FIND THEIR APPOINTED DESTINATIONS, ORM SYSTEMATICALLY FINDS THE OPTIMUM RISK VERSUS BENEFIT COURSE OF ACTION FOR ANY GIVEN MISSION OR TASK.

*"Ask Orville!" is a new feature of The Combat Edge. It is a Q&A forum that we will publish as we all attempt to get up to speed with ORM and fully merge it into our daily agenda. As long as you have questions, we will publish them and provide a response from our weathered, but highly-trained, ORM dogfight veteran, Orville R. Mudd. Like most of us, he has been involved with ORM throughout his career. He just didn't know it until someone told him what it was called and then taught him to do it better. This month's inquisitive letter to Orville comes from Barksdale AFB LA.*

- Ed.

Orville:

I just finished taking the 1-hour, computer based, ORM Familiarization Course that you sent to all ACC units in mid-April. I must say that I was impressed by the straight forward, easy to understand and user friendly instruction method that Mr. Ron Carr and the talented folks at the Training Support Squadron (TRSS) used. The command should have no problem meeting the 90-day goal of having all ACC personnel trained using this first-class approach.

That aside, I do have a thought that has disturbed me ever since I heard of ORM. Although I agree with the ORM philosophy of optimizing the mission by carefully balancing risk and benefit (I mean, who could argue with that goal), **how are we going to find the time to do ORM with today's high ops tempo?** My plate is so full now that if you expect me to put anything else on it, quite frankly, something will have to fall off.

Busy in the Bayous,  
Capt Lester J. Nukem (Les)

Dear Les:

Thanks for the great feedback on the ORM course. I will pass your compliments along to the talented folks at the TRSS. Regarding the high ops tempo, I get the feeling that you view ORM as something that is separate from and in addition to the other taskings on your plate. If you foresee special ORM meetings being held simply as a sing-along time or as an ORM bonding ritual, let me assure you that is simply not the case. ORM is not an end product, program or task unto itself. On the contrary, it is a tool to help you better and more consistently accomplish the tasks already on your plate. Just as a **road map** systematically helps travelers find their appointed destinations, ORM systematically finds the optimum risk versus benefit course of action for any given mission or task. Let me explain with an example.

Your boss just tasked you to develop a route for a military convoy from Barksdale AFB to Gobblers Knob, Pennsylvania; have it on his desk in 2 hours. You have never been to Gobblers Knob you say, not even for Ground-hog Day! (You certainly have lived a sheltered life.) But don't worry. One method you could use would be to call an emergency meeting of those personnel in your unit who have been to the Knob and use their collective experience to construct an appropriate plan of action. If no one in your unit has been to Gobblers Knob, then assemble the best you have available; any group of experienced drivers will do in a pinch. After exhausting the memory banks of this elite group, there still may be some gaps to fill in. No problem! Relying on some basic knowledge of geographic relationships, your group can intuitively guess their way to the Knob. Of course, there is a tool available for your use...something that would not rely on the experience and intuition of your available members. That's correct, the **road map** I mentioned earlier. (You are really getting the hang of this.) With the use of the map as a tool, you can plot the best available route to Gobblers Knob as well as confidently tell the boss where to gas up, where to stay overnight, how many miles to the destination, how long it will take to get

there, etc. — you get the idea.

At this point, it should seem fairly reasonable (even to the most casual observer) that the use of a tool — such as a road map — is superior to a method that relies entirely on our experience and intuition. Then why, when the boss asks us to identify the hazards and risks associated with a task, do we ignore the ORM tools available to us and revert to using experiential and intuitive information instead? I would suggest that the answer is quite simple.

Most of us are **familiar** and comfortable with a road map. We have been trained in its use and educated to its utility. We are confident that road maps permit a more comprehensive search of the alternatives in a shorter period of time, with less required resources and produce a more consistently superior result. However, ORM tools are **foreign** to most of us. We have not been trained in their use or afforded an opportunity to experience their utility. In short, we fear that using the ORM tools will be a waste of what precious time we have to accomplish the tasks on our very full plates. But the experiences of those military as well as civilian organizations who have used ORM tells a different story. The results clearly show that ORM tools, like a road map, will consistently yield superior solutions to those accomplished through use of experience and intuition alone. Be patient; don't try to change your operation over night. The proven procedures and processes that you have painstakingly established at your unit have, for the most part, served you well. But as you take on new missions, incorporate changes to existing missions and identify areas of operation that could use improvement, give ORM a chance, Les. Try it! You'll like it!

**Keep those cards and letters coming. ■**

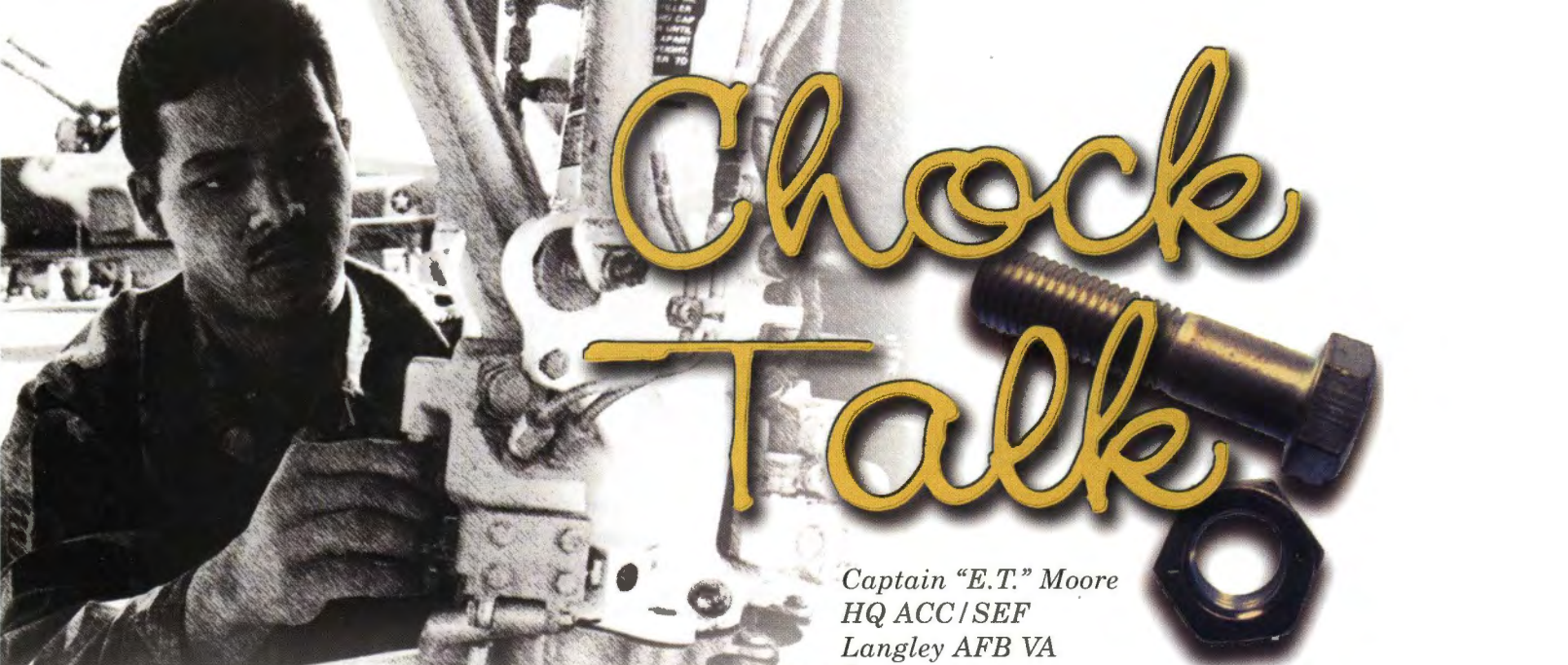
Orville R. Mudd  
ORM Dogfight Veteran  
ACC Office of Safety

**IF YOU HAVE ANY QUESTIONS OR  
COMMENTS REGARDING ORM, SEND  
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**"Ask Orville!"**

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# Chock Talk

Captain "E.T." Moore  
HQ ACC/SEF  
Langley AFB VA

## Flight Safety with a Maintenance Slant

### Ejection Seats... The Aircrew's Last Chance

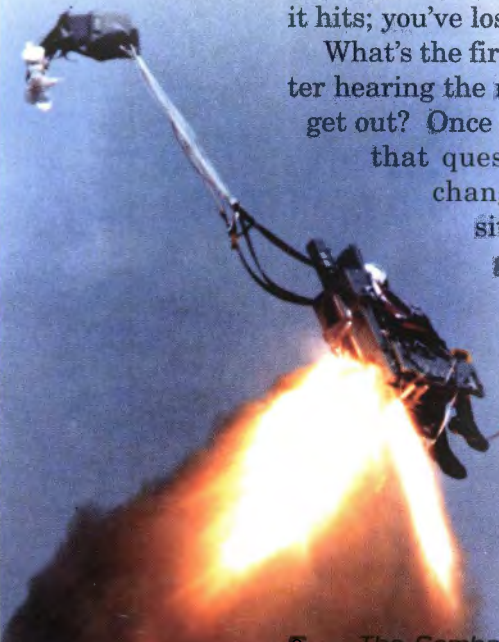
We've all been part of this scene before. Standing around the ready room, sipping a coke (or a cup of black coffee, in the case of us "lifers"); waiting for the 8-ship we just launched to squawk in and land so we can turn the jets again for the next go. Then it happens, the In Flight Emergency (IFE) tone is heard over the radio, along with the message instructing the commander and maintenance officer to report to the Command Post. Quality Assurance (QA) barges into the building to impound aircraft records. Then it hits; you've lost a jet.

What's the first question always asked after hearing the news? Did the pilot/aircrew get out? Once hearing the "Yes" answer to that question, your entire mindset changes. Somehow, the entire situation takes on a lot less urgency. The jet will be replaced; the crew can never be. Everyone breathes a sigh of relief and gets on with the details of preparing for a Safety Investigation Board. The Egress guys decide what case of their

favorite beverage they would like the successful "ejectee" to buy for the shop, but that's all another article. I want this to stay focused on the criticality of ejection system maintenance. We currently fly aircraft with the best technology has to offer in the way of ejection/crew escape systems. But these systems are only as good as the quality of work that goes into maintaining them. A recent Class A mishap highlights the criticality of these life saving systems.

The mishap aircraft took off on a night surface attack training sortie. Approximately 45 minutes after takeoff, the aircraft's engine failed and did not restart. The aircraft was a two-seat version of our finest single seat/single engine fighter. The back seater was not a pilot. The pilot commanded ejection and pulled the handle. The Ejection Mode Selector Valve was in the "Norm" position, meaning that if the front seater (pilot) pulled the handle, the back seater would be ejected first, followed by the front seater. This sequence is vital.

Imagine sitting in the back seat of an aircraft as the front seater ejects over the top of your cranium, rocket motors firing at full thrust. Get the picture? Well, in this case,



something went very wrong during the ejection sequence. The front seater went first, over the top of the back seater who received second degree burns to his face, neck, wrists and thighs, courtesy of the front seat rocket motors. Fortunately, the back seater had enough Situational Awareness (SA) to pull the handle and get out of the jet; otherwise, he would have been part of the smoking hole in the desert below.

What caused this near tragedy? The Safety Investigation Board collected evidence isolating the malfunction to ballistic hoses (hot gas lines) being incorrectly hooked up. The incorrect connection causes the interruption of a dual sequenced ejection from either cockpit. The board could not determine when the lines were misrouted. A redesign effort is underway to prevent incorrect routing of these lines in the future. This was a close call that could have easily resulted in a fatality.

What is the lesson here? Everything that we do in the care and feeding of our aircraft is vital. No one job is any more important than anyone else's when it comes to our business. Did a young airman misroute these critical lines and the follow-on inspection miss it? Did an experienced technician who "knew it all" and didn't need the tech data misroute the lines? Was it a dark, cold night when these lines were misrouted with a production supervisor "explaining" to the technicians that the jet "had" to be ready for the next go? I don't know the answer to these questions but have certainly seen situations where the answer to any of them could be yes. I too have been guilty of putting the pressure on to get that next sortie. An incident like this though should make us all take a step back and rethink the nature of our business...it is inherently unforgiving of carelessness. ■

## "Clamps? What Clamps?"

A recent Class C mishap in one of our F100-PW-100 equipped fighters was a direct result of a situation we've seen before in the PW-100 community. The mishap aircraft departed for an Operation Southern Watch

mission when the pilot experienced engine surges followed by a decrease in RPM and rise in Fan Turbine Inlet Temperature (FTIT) on the #1 engine. The engine was shut down and later attempts to restart it were unsuccessful. The pilot performed a successful single engine landing at a divert base. Investigation of the mishap engine revealed that a fuel line (PFN line) failed at its solder point.

This line provides signal pressure to the engine's unified fuel control which, in turn, controls the Rear Compressor Variable Vanes (RCVVs) to an optimum position for airflow. Put simply, this line provided critical information for engine control; and when it failed, that control was lost and the engine did its own thing. Tech data states that this line must be secured by four retaining clamps to minimize vibration, fatigue and eventual failure. The mishap engine had none.

No clamps were found in the engine bay and it is probable that they were never installed. This is a known failure mode on this engine. Previous failures resulted in a one-time inspection to ensure the clamps were installed. Technical Order (T.O.) 2J-F100-36-5, "Intermediate Maintenance Instructions for the F100-PW-200 Engine," contains final inspection checklists of the engine prior to shipment from the depot. The checklist contains only a cursory inspection of the engine components prior to shipping and does not specifically include checking this line for clamps. The mishap unit's local checklist does not address local PFN line clamping either.

A recommendation is in work to update both the T.O. and locally used checklists to check for the presence of these clamps. Till then, here's a couple questions to think about: Propulsion Shop: What does your checklist say about checking these clamps after receiving an engine from the depot? Flightline: How about your checklist after receiving an engine from the shop?

Until the engineers come up with a sturdier line (also a recommendation), we'll need to take good care of what we have to work with. Let's clamp up — so the little trouble-makers can't get loose! ■

# PARADE Who, Me? The

Colonel Vinnie Noto  
HQ ACC/SEF  
Langley AFB VA

**A**fter realizing it took me four pages just to write about the first day, I decided to write about a few unique/strange events which actually happened during my first investigation in 1987.

Shortly after the B-1 crash investigation had begun, the team realized the egress system had malfunctioned. For a period of time, this problem took precedence over everything else most of the board was doing. The fleet was still flying; the natives were restless. At a morning meeting, the egress specialists from Kelly AFB and Wright-Patterson AFB thought they had discovered a serious malfunction with their system. We had three seats and four hatches, but we needed more. This required a major search of the wreckage for all (and I mean all) of the egress system parts we could find. We began placing every piece of the system we could find in a building and started putting the system back together again. X-rays of a particular part confirmed

we had a serious problem. The Board President (BP) made a critical phone call that evening. We all knew what it was about, but we could only guess to whom it was to...it wasn't a happy call. At first light the next day, the BP disappeared. A T-39 jet transport aircraft arrived at our area; and both the BP and the System Program Office (SPO) egress specialist were flown to

another location. I never did ask who they saw that day, but the list was impressive. The next day, the B-1 fleet was grounded. As if we needed more pressure on the board... well, we had it now!

In my spare time, I enjoy reading about the Civil War. I had recently read a book on tactics and formations; little did I know we would soon be marching across the Colorado countryside. The aircraft was not designed with a survivable crash data recorder as we know them today but has a maintenance

---

On one of our last attacks, under some obscure sagebrush, a young troop found what looked like a piece of cassette tape, something we, unfortunately, see today littering the countryside. What a find!!!

---

data recorder with some survivable characteristics which records a significant



A black and white photograph of a person wearing a cap and work clothes, bent over and examining the ground in a field of tall grass. The person is positioned in the upper right quadrant of the page, above the main title.

# Investigation Continues

number of critical system indicators. It records this data on something that looks like a cassette tape. We needed this tape. The BP made a few phone calls, and the next day we had several hundred Air Force and Army personnel arriving at the crash site. It was a gamble; we had been over the site many times already and based on the devastation held out little chance of finding this fragile piece of evidence. We briefed the troops on several items we were looking for as well as the hazards and dangers of the site. We planned our attack. The line-up of troops was impressive, each board member having a radio, sun block, water...the flight doc even had his snake-bite kit. Thank goodness for hand-held radios! I don't know how General Grant did it -- we couldn't keep the troops in line. At midday, we fed the troops; otherwise, I think we would have had a revolt. Despite our best planning, we had several wounded in action: bee stings, twisted ankles, snake scares, dehydration, sunburn, etc.

On one of our last attacks, under some obscure sagebrush, a young troop found what looked like a piece of cassette tape, something we, unfortunately, see today littering the countryside. What a find!!! I'm not sure we thanked this person enough.

This small piece of tape gave the board some critical information about the last several minutes of the mishap flight. No, it wasn't the golden BB, but darn close! The full analysis took several weeks and our maintenance rep was gone with our little piece of gold. We were already racking up an impressive list of side-trips. He logged the most trips, but mine were the most memorable — and mine was next!

It was about noon. I was out at the crash site picking up parts as I would continue to do for several weeks. The Numbered Air Force's rep on the board came out and said the BP wanted to talk with me. I knew they had seen me doing a little bit of excessive four-wheeling over those dirt roads! As luck would have it, the Radar Bomb Scoring site on the range had been testing a new video tracking system which was tied to the aircraft squawk identification signal. We actually had a video of a good portion of the mishap aircraft's last few seconds. The BP told me I was going to an agency (which will remain nameless), who specializes in looking at photographs. **"You want me to go where?!?"** We had to send them my life history, but we got approval to have our video looked at. The trip was great...NOT! My luggage went to one airport, I landed at

**"You want me to go where?!?"**

the other, same town; go figure. After three flat tires in my rental car (that's another story), I checked into my hotel at 1:45 a.m. and left again at 5:30 a.m. I still couldn't find a place to park and people never seemed to sleep in that town. After proving who I was (the flight docs couldn't have done a more thorough inspection!), I was briefed on what not to look at and taken to an analyst's desk. The guy was an abso-

look. It was an eye-opening experience; and it's amazing: cow pies look like aircraft pieces from 100 feet. We must have found a million cow pies, and I got to look at every one! The most amazing part of the flight was the birds. The low-level route took the aircraft directly between two lakes (does this sound like a topic for risk management?). I don't think I've ever seen so many birds in one general area in my life! Both

lakes were white with thousands of inland pelicans, gulls, ducks, etc.; and they really enjoyed flying from one lake to the other at the very altitude we fly at. I didn't want to get tangled up with that deadly sea of white. Thanks to my fearless pilot, we survived.

For many of you who have done an investigation and found the golden BB, well done. But for many investigators, the cause(s) can never be 100% confirmed. You use all the evidence you can get, within a

limited period of time, and come up with a reasonable, logical conclusion to what happened. There will be those who say you missed the boat; but those nay-sayers don't usually see all the evidence, read the full report or have the same knowledge most boards do. My feelings have always been, "We've done the absolute best job we know we can do. We didn't exactly hit the nail on the head on this one; but maybe, just maybe, the recommendations we made actually prevented the next mishap." Think about that. Be writing soon! ■



*Team recovers B-1 engine from crash site.*

lute genius! The video analysis was remarkable; the magnitude of the fire was startling. We now had another critical data point! I don't remember the trip back to the site, but it was uneventful. Eventually, we would use the video in our accident briefing.

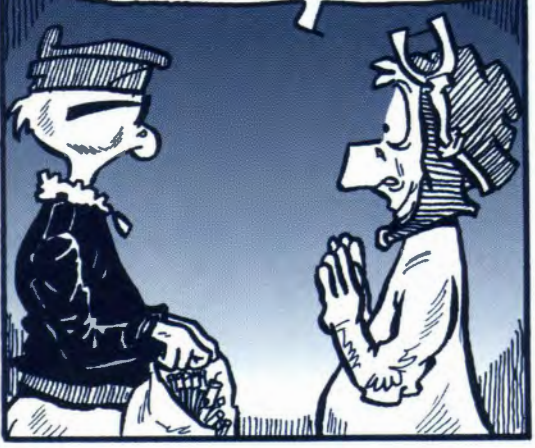
My last adventure was the most fun. We used quite a bit of support from the helicopter companies out of Fort Carson. I was selected to go on a bird/part hunting trip with an Army "rotor-head." (One of my Flight Safety Officers in the office, a former Army chopper pilot, said this was an affectionate term; I'm not so sure!) Our task was to fly back down the route of flight and just

**Fleagle**

FLEAGLE, ME AN' TINY GOT THESE FIREWORKS AT A REALLY GOOD PRICE. SO WE GONNA LIGHT UP TH' FOURTH. CARE TO HELP?



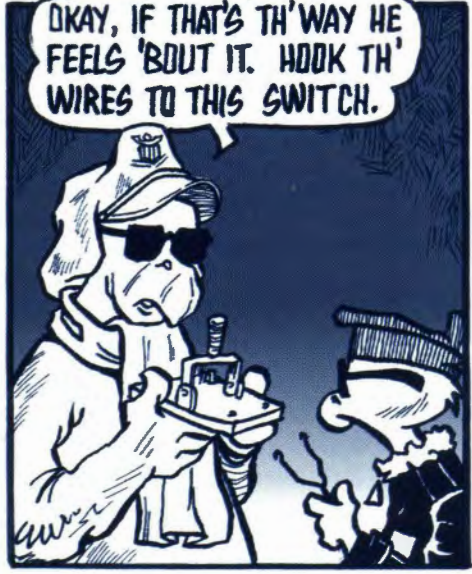
UH-NO! EACH YEAR I TRY THAT I GET IN A WORLD OF TROUBLE.



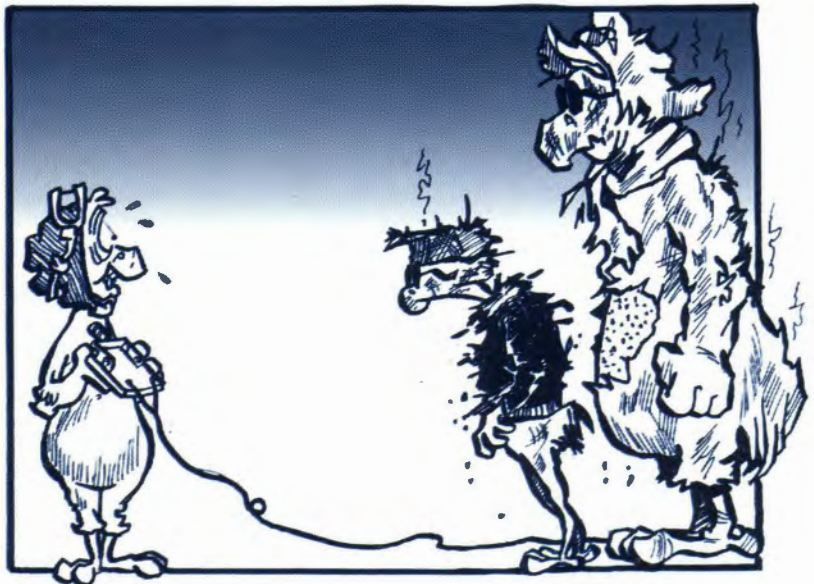
FLEAGLE AIN'T GONNA HELP.



OKAY, IF THAT'S TH' WAY HE FEELS 'BOUT IT. HOOK TH' WIRES TO THIS SWITCH.



**BOOM!**



# MONTHLY AWARDS



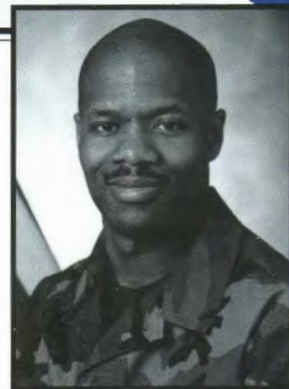
## PILOT SAFETY AWARD OF DISTINCTION

*Maj Mark A. Ronco  
442 OG, 442 FW  
Whiteman AFB MO*

Maj Ronco had just raised his gear after takeoff for a night mission when his A-10A was impacted without warning by five large waterfowl. Sound from the impact was masked by radio transmissions. One bird passed through the right engine, causing severe damage. Another bird penetrated the right gear pod nose and severed both the pitot and the static lines, causing loss of both airspeed and altimeter indications. Since the birds were not visible in the darkness, Maj Ronco's first indication of a problem was heavy aircraft vibration. He continued his climb, called a knock-it-off and directed his wingman to close for a check. Maj Ronco directed the wingman to use night vision goggles to inspect his aircraft, but the wingman was unable to see any external damage. Engine indications were within normal parameters. Since the vibration appeared to be coming from the right side of the aircraft, Maj Ronco carefully retarded the right throttle to idle which reduced the engine vibration to a more tolerable level. Despite the fact that he was flying in total darkness, in a single-engine configuration with no airspeed, altitude, or VVI with the root cause of his malfunctions completely unknown, Maj Ronco was able to maintain aircraft control and establish a wide downwind pattern. He attempted to further analyze his condition, but there are no procedures in the emergency checklist which matched his unusual combination of symptoms. Consultation between Maj Ronco, the SOF and an experienced FCF pilot confirmed that his condition lay well outside normal A-10 failure modes. With no other options apparent, Maj Ronco directed his wingman to a chase position and set up for a long straight-in final. Utilizing single-engine procedures, with the wingman continuously advising him of airspeed, altitude and descent rate, Maj Ronco executed a flawless approach and landing. Maj Ronco's outstanding airmanship, flawless self-discipline and superior flying skills in the face of a dual aircraft malfunction outside normal guidelines, averted the loss of valuable combat resource and precluded the potential for severe damage or injury to persons or property in the surrounding community.

## FLIGHT LINE SAFETY AWARD OF DISTINCTION

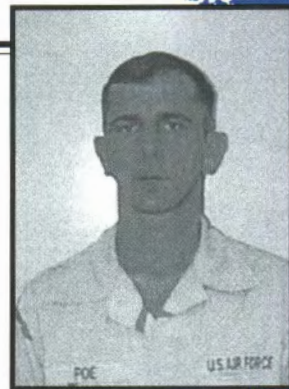
*TSgt David C. Gipson  
95 RS, 55 WG  
RAF Mildenhall UK*



During a preflight walk-around inspection of an RC-135 aircraft, Technical Sergeant Gipson performed a routine inspection for possible hydraulic leaks. While inspecting accessible hydraulic components in the left wheel well, he discovered the support bracket for the emergency flap drive motor was cracked and had separated from the bulkhead. The emergency flap motor rested loosely in the wheel well area, supported only by its cannon plug and suspended against the lower flap drive torque tube. In this suspended position, normal operation of the flaps was still possible and continued without any indication of a flap system malfunction. Under this condition, each time the flaps were repositioned, the lower flap drive's torque tube rotated and caused chaffing to the tube while the drive motor rested on it. In addition, the weight of the motor, suspended on the lower torque tube, caused the emergency flap drive torque tube, also connected at the motor, to drop at a very severe input angle. Undoubtedly, this condition would have resulted in a sheared lower torque tube as well as a jammed/buckled emergency torque tube, rendering both normal and emergency flap systems inoperative. It is undetermined when the support bracket failed, how long the flap drive had been chaffing the torque tube or how long before catastrophic failure would have occurred. It is clear, however, that a very serious condition was discovered and remedied through Sergeant Gipson's alertness and positive actions. Sergeant Gipson's personal efforts and attention to detail defused a potentially catastrophic system failure—eliminating a critical threat to a multi-million dollar national reconnaissance asset and its crew of 23.

## GROUND SAFETY INDIVIDUAL AWARD OF DISTINCTION

*MSgt Harold W. Poe  
4410 AS (P), 4404 WG*



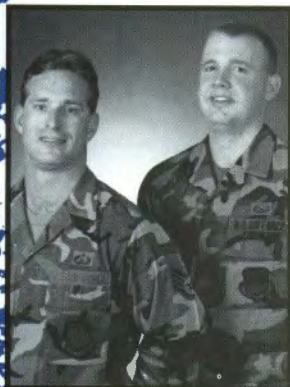
As the night shift production supervisor, Master Sergeant Poe managed six C-130E aircraft parked on the ramp between numerous USAF KC-135 stratotankers and French Air Force Mirages. While on the flight deck of a C-130 checking the AFTO 781 to review the aircraft status, Sergeant Poe heard "there's fuel coming out of the wings of that aircraft over there!" emanating from a concerned voice. He stepped out of the aircraft and saw fuel pouring out of the wingtip drainmasts of a C-130 parked in the next row. He immediately ran towards the aircraft as he radioed the Maintenance Operations Center (MOC) and declared a ground emergency. He also requested notification of the fire department and that an inbound C-130 be diverted to another location. As he approached the aircraft, he noticed the power cart being pulled away; so he rushed inside and used battery power to close the fuel dump valves. With fuel still spewing from the wings, he cleared all equipment and personnel from the aircraft and radioed MOC for absorbent material to contain the fuel spill. Sergeant Poe also dispatched a crew chief to obtain a tow vehicle to move the disabled aircraft once the situation was declared safe. He then radioed Air Terminal Operations Center and requested a section of the ramp be blocked off and a 150-foot area be cleared to tow the aircraft once the fuel spill stopped so the cleanup could begin. Once the fire department arrived on the scene, Sergeant Poe quickly explained the situation then left to apprise fuel specialists working in another C-130 of the situation. Sergeant Poe's quick and clear-headed thinking throughout this episode kept the situation from worsening and prevented a potentially disastrous situation on a crowded ramp. He proved quick thinking and quality training can prevent a mishap from endangering lives and damaging Air Force equipment.



## CREW CHIEF EXCELLENCE AWARD

*SSgt Cary T. Brown  
303 FS, 442 FW  
Whiteman AFB MO*

On Sunday, 16 Mar 97, Staff Sergeant Brown was working as the "A" man during an Integrated Combat Turnaround. As engine shutdown procedures were undertaken for the A-10A, Sergeant Brown noticed that fuel failed to scavenge from the number one engine. He then observed smoke coming from the tailpipe, which is indicative of a potential post shutdown fire. He immediately responded by posting fire guards, evacuating non-essential personnel from the area, and requesting the pilot declare a ground emergency. Holding a fire extinguisher hose at the ready, he then worked with the pilot to accomplish emergency shutdown procedures without increasing the risk to the aircraft or personnel. With Sergeant Brown's instruction, the number two engine was throttled to 85 percent for a cross-bleed to engine one, which enabled it to be motored, and thereby averting a major fire. Sergeant Brown's leadership, experience and calmness under pressure helped ensure the ground emergency was promptly addressed and abated without additional loss of resources or injury to the pilot or ground crew.



## WEAPONS SAFETY AWARD OF DISTINCTION

*SSgt Leonard M. Bevilaqua, SrA Nathan G. Roop  
20 EMS, 20 FW  
Shaw AFB SC*

A few months ago, Senior Airman Roop was performing a periodic inspection on LUU-1/B flares. During the visual inspection of the sample size, he noticed the lot had two different Department of Defense Identification Codes (DODICs). He contacted his supervisor, Staff Sergeant Bevilaqua, and they double checked the FED LOG and the Technical Order and identified only the DODIC marked on the container. They immediately contacted the item manager and he said that the unidentified DODIC was a Locally Assigned Ammunition Reporting Code (LARC). They checked both the DODIC and the LARC against the 11A-1-1 Munitions Item Suspended or Restricted Technical Order and discovered the flares had a restriction assigned under the LARC and no restriction against the DODIC marked on the container. After further investigation, they discovered the item manager had listed the restriction under the LARC and not the DODIC. They submitted a corrective work package that was approved on 20 Mar 97, recommending that restrictions assigned to these assets be identified by DODICs only. Airman Roop and Sergeant Bevilaqua's attention to detail ensured the proper classification of these assets and prevented a possible explosive mishap.

## **AIRCREW SAFETY AWARD OF DISTINCTION**

*Capt Mike Dezzutto, Capt Mike Burris  
Capt Michael Strachan  
1Lt Carl Misner, SSgt Audry Venegas  
SrA Jim Groh  
38 RS, 55 WG  
Offutt AFB NE*



On 6 Dec 96, the crew of a 38 RS RC-135 Rivet Joint was flying an operational reconnaissance sortie from Kadena AB, Japan, directly supporting NSA, NCA, and Pacific Reconnaissance Operations Center taskings. The crew was assigned TDY to the 82 RS supporting reconnaissance operations for the 55th Wing. Pre-flight, taxi and departure were uneventful. As the mission aircraft was climbing through 10,000 feet, the #4 engine fire illuminated. Once the aircraft was at a safe altitude, Captains Dezzutto and Burris successfully shut down the #4 engine IAW the Dash 1, Section 3 procedures. After shutting down the engine, Capt Dezzutto noticed the right hydraulic system had been depleted. Lt Misner was directed to visually scan the effected engine. He reported hydraulic fluid running down the wing in the vicinity of the flaps. Further investigation determined the right hydraulic system had ruptured and depleted, resulting in the complete loss of that system. The crew carefully ran all appropriate checklists and discussed the problem with maintenance personnel on the ground at Kadena AB. To further complicate the situation, the weather at Kadena began to deteriorate rapidly. The wind had increased, and the crosswind was approaching limits. A complete loss of the right hydraulic system renders the powered rudder inoperative, which would make landing in high crosswinds extremely difficult. Because of deteriorating weather, Capt Strachan coordinated with the command post to recall the sortie's canceled tanker in the event the aircraft needed to divert. In-flight refueling would be necessary to divert and land safely with required fuel minimums. After a thorough review of technical orders, the crew determined a hydraulic crossover could be safely accomplished. This procedure allowed the crew to recover the powered rudder and land safely at Kadena AB. If the crew had been unable to crossover the hydraulic systems, they would have been required to divert to Yokota AB, since the crosswinds at Kadena and all other Okinawan airfields were above the limit for an RC-135 with no rudder power. After a successful crossover of the right hydraulic system, the crew adjusted aircraft total gross weight by 37,000 lbs to meet a safe landing weight. Capt Dezzutto skillfully controlled the three-engine aircraft through the approach and touchdown in a near-limit crosswind, successfully bringing the aircraft to a full stop on the runway at Kadena. The crew's timely response to the most challenging combination of malfunctions in the RC-135 resulted in their successfully saving a 500 million dollar national asset and the personnel on board and preventing loss or delay of subsequent operational sorties. A post-flight inspection revealed a hydraulic line had ruptured in the right wing causing the loss of the right hydraulic system. A defective fire detection wiring bundle was found to be the cause of the fire light.



# Defining Moments

*Lt Col Kurt "2-Lips" Dittmer, 421 FS/DO, Hill AFB UT*

**A**fter attending the beautiful memorial service for a French pilot killed on an Operation Southern Watch mission in Southwest Asia, I was asked how pilots deal with the loss of a fellow aviator. After some reflection, I realized it's never easy — even though we deal with death more often than folks in other professions. Some people who witness a tragedy for the first time may change their behavior, or the way they view life, for the rest of their days. The tragedy for these people has become a "defining moment." A defining moment can occur anytime in our lives and doesn't have to be related to flying — it is critical in our maturation process and important for our survival.

When I was young and inexperienced, I seldom thought about the consequences of my actions. I'm sure I wasn't the only one who acted like this. For instance, young motorcyclists ride without a helmet because of the feeling of freedom and openness it gives them; their view isn't constrained by the edges of a helmet and they can better feel their environment to quickly react to danger. Many probably feel they are invincible and don't need a helmet because they are good enough to avoid an accident. However, one has to realize they have not yet experienced a

"defining moment."

A highway patrolman who has investigated motorcycle accidents and seen the aftermath of head injuries and notified the parents of a teenager's death will think differently than an inexperienced youth before riding a motorcycle without a helmet. Probably the first accident the officer investigated was the defining moment for him — that first accident showed that no one is invincible and that there are serious consequences to our actions.

In the flying business, we must make life and death decisions often. Mistakes that result in accidents are catastrophic because of the tremendous speeds and the nature of the machines and the regimes in which we operate them. Our probability of witnessing a fatality in our careers is fairly high. How we react after seeing an accident is critical in our survival process.

My defining moment came as a lieutenant when I watched a good friend ride an aircraft into the ground. He was violating regulations and common sense, hit some power lines and was killed instantly. The aftermath of the accident did not affect him — his life ended in moments. He doesn't live with the memories of seeing a fireball or the tears of his pregnant wife as we tried to console her. He doesn't





*My defining moment came as a lieutenant when I watched a good friend ride an aircraft into the ground.*

live with my guilt that maybe I could have prevented a friend's death. Perhaps I couldn't have prevented his death, only delayed it until another sortie, because I believe he had yet to experience a defining moment for himself.

That incident changed my behavior. I view flying differently than I did before the accident. I understand that the regulations are there for a reason — most of them have been written in blood. The consequences of violating regulations and/or pushing the aircraft or ourselves outside of the “envelope” can be fatal. My chances for survival went up after witnessing death because it changed my behavior. I matured and became a survivor.

Not everyone in the squadron reacted to the mishap in the same way I did. Some figured since they didn't violate regulations, they weren't in danger. Others tempered their actions and straightened up to fly right. Initially, we were all in shock. But operations must go on, and the leadership ensured that we jumped in the jets as soon after the accident as possible. As with all mishaps, pilots must overcome initial apprehensions by re-establishing competence and control over the machines they fly. But if we are smart, everyone close to the mishap learns from the experience and changes their behavior. In the

safety business, we see it as education towards prevention of a similar accident. Sometimes technical orders or regulations must be rewritten. Sometimes leadership must depart the realm of safety privilege and correct situations through disciplinary actions.

One pitfall that pilots must avoid is becoming callous after seeing too many accidents. There are few pilots flying jets that believe an accident could ever take *their* lives. Most believe it could only happen to the other person — never them. It has to be that way. Survivors continually analyze mishaps to figure out what went wrong, who made mistakes and what caused the accident. That way, if we are ever put in the same situation, we will have already “experienced” it (if only in our decision-making process) and defined how we will survive that same situation. We add to our experience through other pilots' misfortunes.

Was our French comrade's life lost in vain? What did he do right? What did he do wrong? What can we do to enhance our probability of being a survivor if we are faced with a similar event or circumstance? Answers to questions like these are important. We must always be open to redefining the actions we take in life... as we wait for our “defining moment.” ■

**96**  
**FY**

**USAF SAFETY**

**SYSTEM OF COOPERATION AMONG THE AIR  
FORCES OF THE AMERICAS (SICOFAA) FLIGHT  
SAFETY AWARD**

The SICOFAA Flight Safety Award was set up by the Chiefs of the American Air Forces at their annual meeting (CONJEFAMER) in the United States in May 1976. The purpose of the award is to promote safety in the air forces of Western Hemisphere countries by recognizing flight safety accomplishments of military organizations.

*55 WG, Offutt AFB NE*

**EXPLOSIVES SAFETY PLAQUES**

Awarded to the following organizations for their outstanding achievement and contribution to explosives safety:

*33 FW, Eglin AFB FL  
366 WG, Mountain Home AFB ID*

**FLIGHT SAFETY PLAQUES**

Awarded to the following organizations for outstanding mishap prevention:

*55 WG, Offutt AFB NE  
33 FW, Eglin AFB FL  
314 AW, Little Rock AFB AR  
4 FW, Seymour Johnson AFB NC  
1 RQG, Patrick AFB FL  
552 ACW, Tinker AFB OK*

# **ETY AWARDS**

## **AIR FORCE NUCLEAR SURETY OUTSTANDING ACHIEVEMENT AWARD**

The USAF Directorate of Nuclear Surety created this award in 1981 to acknowledge the significant achievements of individuals in the nuclear weapons career field. In 1989, the eligibility criteria was amended to include the contributions of personnel engaged in nuclear power system activities. Effective with the FY 93 cycle, the approval level was elevated to the Air Force Chief of Safety, and the award is presented to one recipient only.

*SSgt Joseph A. LeMaster, 55 MSS, Offutt AFB NE*

## **MISSILE SAFETY PLAQUES**

Awarded to the following organizations for their outstanding achievement and contribution to missile safety:

*366 WG, Mountain Home AFB ID  
388 FW, Hill AFB UT*

## **NUCLEAR SURETY PLAQUES**

Awarded to the following organizations for their outstanding achievement and contribution to nuclear surety:

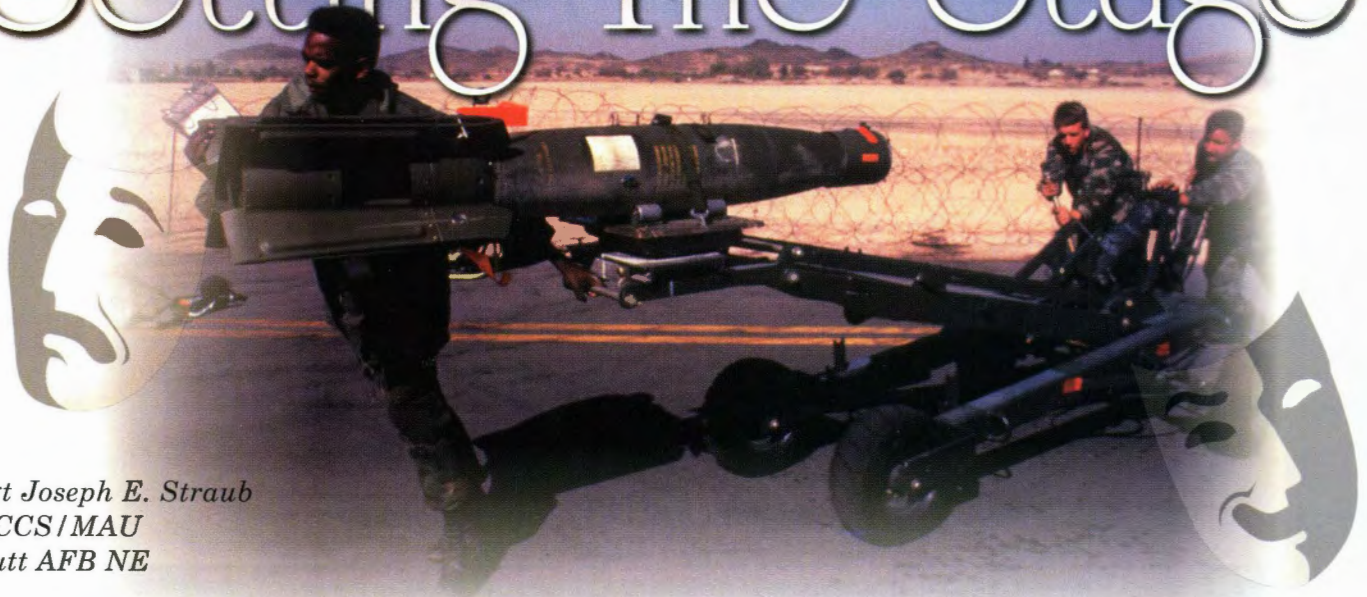
*2 BW, Barksdale AFB LA  
55 WG, Offutt AFB NE*

## **AERO CLUB CERTIFICATES**

Awarded to the following bases for flight safety achievements:

*Barksdale AFB LA, Beale AFB CA, Davis-Monthan AFB AZ  
Offutt AFB NE, Shaw AFB SC*

# Setting The Stage



*TSgt Joseph E. Straub  
7 ACCS/MAU  
Offutt AFB NE*

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**The best and only way we can ensure a safe performance is to train from the technical data and Air Force publications that go with the job.**

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A few months ago, I remember reading about the opening of the new Shakespearean Theater in England. It is a replica of the original that was destroyed by fire some 700 years ago. What drew my attention to the story was in the opening performance, an actor fell from a ladder and broke his leg. I thought to myself how much the actor really depended upon the stage managers and hands for his safety during the performance. As I observed in this particular instance, one thing not properly secured can result in injury.

As I pondered on the story, I realized how much our new troops also depend upon us as their supervisors and trainers to set up a safe stage for them to perform on. As supervisors, we carry a great responsibility. It is up to us to ensure each of our people receive proper safety training in all aspects of their job - - whether it be lifting or tight-

ening nuts and bolts.

As we grow in our job and technical expertise, we often assume that newly assigned troops know more than they actually do. Remember that the Air Force is a new experience for our beginning airmen. How many times did you work around a high performance fighter aircraft or B-2 bomber while going to high school? Even though most go to a technical school before coming on the job, young airmen still need to adjust to the high-pace, do-more-with-less environment in which most of us work. To say the least, most will probably be overwhelmed by it all.

As trainers, we have the task of training new troops in the proper and safe way of performing our daily missions. Whether it is loading freight or turning a wrench, safety must be engraved into the training scenario. We are the ones who "set the stage" for a safe performance or a cata-

strophic accident. When training them in a new task, safety procedures concerning that new responsibility must be emphasized. If we fail to do this, then we have failed our trainee. We cannot take for granted that he or she knows all or even some of the safety precautions. Also, there are dangers in our "do-more-with-less" environment that they need to know about. The best and only way we can ensure a safe performance is to train from the technical data and Air Force publications that go with the job. Then, by adding a dash of experience, we can complete the training cycle.

Upper level supervisors are the "stage managers," and a great performance cannot be given if everything isn't just right for our "actors." As supervisors and shop chiefs, we are responsible for assigning our trainers and ensuring our training is current, comprehensive and utilized. We need to enforce our safety programs; we are the

ones ultimately responsible. When was the last time you reviewed your shop training plan or took a good "over-the-shoulder" look at the training that is actually taking place in your unit? Furthermore, when was the last time you updated your shop safety book or looked at your troops' Employee Safety and Health Records (Air Force Forms 55)? I recently looked at a shop's safety book and found out that the last time that it was updated was in 1992. That's a long time; in fact, Air Force Regulations have since turned into Instructions, and Air Force Occupational Safety and Health (AFOSH) Standards have changed as well.

They say that most things are best learned and retained through doing and watching others. We all must set the examples we want our young troops to learn. Doing the job right and doing it safely is the only pattern to follow. If we take short

cuts, you can be sure that our troops will pick up on those bad habits and start establishing unsafe work practices for themselves, as well.

So, what about the actor's responsibilities? As actors, or new trainees, your responsibility is to learn how to do your job in a safe and efficient way. To do this, you need to get into the technical data and publications that go with your job. Your trainers are there to teach you. They were selected to serve as your instructors because they have the expertise and knowledge to pass on the required information to you. It is your responsibility to ensure your training is complete. Do

not give your supervisor (or others you work with) the impression that you already know how to accomplish a task if you truly do not feel qualified to carry it out in a safe and thorough manner. It is your right to receive the training you need. If you are not getting it, don't be

afraid to talk with your supervisor. Remember, it is his or her ultimate responsibility to see that you are trained and trained right. One day, you might even be the trainer!

Trainers, supervisors and actors carry the heavy burden of "setting the stage" for a safe performance. This is true not only in our work environment but in our personal lives as well. It takes a lot of planning, coordination and practice. We all have an important role to play. We all came in with eyes, fingers, toes and strong backs; we should leave the service in the same way. The performance can be great, but it's up to you! ■

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**Upper level supervisors are the "stage managers," and a great performance cannot be given if everything isn't just right for our "actors."**


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# SURPRISE, SURPRISE, SURPRISE!

*TSgt Barry C. Morris  
55 WG/SEW  
Offutt AFB NE*

**A**irman Gomer Youngfellow had just finished a demolition operation at Somewhere AFB, USA. The disposal operation went well; all he had left to do was clean up and get his performance feedback from his supervisor, Staff Sergeant Hardnose. The following situation transpired as he turned in the empty containers and extra packaging material left over from the operation to the munitions area:



“Hey, Gomer, did you use all of the explosives during your demolition operation?” bellowed his good friend and ammo troop named Mac. “Yup, sure did, and here’s all of your empty containers and packaging material. I better go, the boss is waiting to give me feedback on the operation,” cried Gomer. “Hold on, Gomer, let’s check these containers before you go. I’ve got things to do myself, but it will only take a few minutes if we both do it,” remarked Mac. “OK, but let’s make it quick, I know we used everything!” exclaimed Gomer.

While emptying the containers and packaging material, an amazing discovery took place. Two extra non-electric blasting caps somehow did not get used. “What’s this Gomer?” queried Mac. “Well, Gollolliee! Surprise, Surprise, Surprise! Would you look at that?! Wait ’til Sergeant Hardnose hears what we found!” piped Amn Youngfellow.

Sound ridiculous? While this story is fictitious, I’m certain it has happened before...and it is likely to happen again. Regardless of where you’re stationed, explosive items somehow will not always be 100 percent accounted for and will tend to show up in the worst places.

Fortunately, Mac (the ammo troop in this story) broke the chain of events of a possible mishap. What would have happened if those blasting caps had been overlooked?

Do you remember when the Mk20 Rockeye cluster bomb ended up in an overseas salvage yard and was crushed? How about the Security Policeman who found a Ground Burst Simulator (GBS) and decided to dispose of it himself? What about the recent incident where a supposedly empty AGM-65 Maverick missile container was shipped to depot for refurbishment? These examples actually happened, but they could have been prevented.

Munitions residue inspections do not always get our full attention until it’s too late. Let’s face it; they are tedious. Also, they’re not high visibility processes that your unit may show off during assessments and inspections. You can get top level coordination without much trouble on a new explosives site plan; however, try to coordinate a base munitions residue operating instruction and see

where that sits on everyone’s priority list.

Who is accountable? Everyone is — including unit munitions account custodians, unit account certifying officials, unit commanders, users, munitions inspectors, Munitions Accountability System Officers (MASOs), as well as Weapons Safety Managers. We all have a stake in the process and share responsibility for ensuring explosives are accounted for and do not end up in the wrong place.

What can we do to prevent these situations from happening? First, remember that established guidance exists for munitions accountability and residue in AFI 2I-202, “Combat Ammunitions Systems Procedures,” and Technical Order (T.O.) 11A-1-60, “Inspection of Reusable Munitions Containers and Scrap Materials Generated From Items Exposed to or Containing Explosives,” respectively. When was the last time you reviewed them? Has the guidance changed? Has your unit established local procedures for munitions residue turn-in? Do unit explosives

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## “An ounce of prevention is worth a pound of cure!”

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operating instructions (OIs) contain procedures for munitions accountability and residue turn-in? Does your Weapons Safety Office spot inspect the Defense Reutilization and Marketing Organization (DRMO) holding yard and the munitions area empty container holding area? Check with your MASO about Found-on-Base (FOB) munitions statistics for your base: Is there a trend?

Sounds like a lot of work, doesn’t it? You bet! Ask either a unit munitions custodian who’s short on his latest quarterly inventory, a MASO about FOB munitions or a Weapons Safety Manager about mishap investigations or explosives accidents. They will all agree **“An ounce of prevention is worth a pound of cure!”** The hard pill to swallow comes when someone gets hurt and we could have prevented it, so let’s think “Safety First!” ■

# LISTEN UP! If You Can

*Mr. Michael P. Barnes  
HQ ACC/SEG  
Langley AFB VA*

**I** once read the statement: "The only time you should not be wearing a radio headset while you're walking or jogging...is when you have an accident... because it would be difficult to collect on an insurance claim!"

What am I talking about? What's wrong with a little music every now and then? Well, nothing. But, what I'm getting at is the common practice of wearing radio headsets or headphones while walking or jogging in



a traffic environment! The Air Force loses too many (and one is too many) people each year from being struck by vehicles! Yes, they're pedestrians and their belief is they have the right-of-way, but who wins these contests? The motor vehicle does! In the United States alone, approximately 7,000 pedestrians die in mishaps each year and another 50,000 suffer disabling injuries. Why compound your chances of survival by wearing headphones while you walk, jog or ride your bike in traffic!

Your response may be, "Now just a minute! Aren't there regulations against jogging or biking with headsets on? I mean, doesn't the Department of Defense or Air Force say this is prohibited?" Well, in the past, there were regulations that disallowed wearing these devices while "jogging" at one time or another. Presently, Department of Defense Instruction (DoDI) 6055.4 states: "The wearing of portable headphones, earphones or other listening devices while operating a motor vehicle and while bicycling, or skating on roads and streets on DoD installations is prohibited." This prohibition is also echoed in AFI 91-207, *The US Air Force Traffic Safety Program*. Nothing in there addresses jogging or walking! Probably, the only regulation you can find that forbids jogging while wearing portable headphones would be an old wing or unit regulation or possibly a new wing instruction.

You may say, "Look, as long as I walk or jog facing traffic, I can wear my headset. I can see the vehicles and avoid getting hit!" But that statement is not completely true. Walking or jogging facing traffic is correct, but wearing headsets can mask sounds that serve as triggers for your body to react. Your eyes and ears work as partners, giving each other cues as to where to look and "when to hear."

"Hold on now! That really sounds far-fetched — **when to hear!**" No, it's not really far-fetched. Consider this for instance; you see an aircraft making a low approach and coming toward you. You know that now is a good time to plug your ears. How about during the Fourth of July! There are plenty of opportunities for your eyes to

let you know when to hear. On the other hand, your ears help your eyes to focus in on the source of noises, i.e., you hear the squeal of brakes and look back to see what happened or jump out of the way!

Your response may be, "Okay, but what if I turn the volume down to where I can hear traffic above the radio? Won't that do the trick?" I would say, "NO!" Volume is a major issue; but even if you turn it down, you still have your hearing impaired by the sound coming from the headphones and your ears are blocked by the headset. Your attention to what you are doing and where you're going would also be divided between the radio and walking or jogging.

Then you say: "Vehicle drivers listen to radios while they're driving. What about their attention?" You're right! Some people play their radios and super-mega bass blasters so loud that their car literally shakes. Are they distracted? Absolutely! But, they are also protected by seat belts, air bags and several thousand pounds of metal versus the joggers' thin layer of nylon spandex. Want to bet on who gets the worst of an encounter? Don't assume a driver will obey the laws or be mindful of pedestrians' rights. Even if you have the right-of-way, never challenge traffic!

"What if I have a portable radio in my pocket or hanging from my belt with no headset — would that be okay?" This shouldn't present a problem as long as the volume is reasonable and you are still able to observe and hear the traffic situation around you. However, don't forget to wear bright or fluorescent clothing during the day. Furthermore, carry a lighted flashlight and wear reflective materials at night.

In summary, do yourself and others a favor by making the following commitment: "I will not wear a headset in traffic situations regardless of what I am doing. I will ensure that I am visible and make eye contact with drivers, when necessary, before crossing the street." Remember, you are responsible for taking care of yourself. You owe it to your family as well as the personnel in the unit to which you are assigned. Stay safe, healthy and alive! They like you that way! ■

# Accolades

QUESTIONS OR COMMENTS  
CONCERNING DATA ON THIS  
PAGE SHOULD BE  
ADDRESSED TO HQ ACC/SEF,  
CAPT "E.T." MOORE  
DSN: 574-7031

	TOTAL			ACC			CANG			CAFR		
	MAY	THRU MAY		MAY	THRU MAY		MAY	THRU MAY		MAY	THRU MAY	
		FY97	FY96		FY97	FY96		FY97	FY96		FY97	FY96
CLASS A MISHAPS	3	14	6	3	7	3	0	4	3	0	3	0
AIRCREW FATALITIES	1	14	0	1	2	0	0	2	0	0	10	0
* IN THE ENVELOPE EJECTIONS	1/0	9/0	4/0	1/0	3/0	2/0	0	3/0	2/0	0	3/0	0
* OUT OF ENVELOPE EJECTIONS	0	0	1/0	0	0	0	0	0	1/0	0	0	0

\* (SUCCESSFUL/UNSUCCESSFUL)

## CLASS A MISHAP COMPARISON RATE

(CUMULATIVE RATE BASED ON ACCIDENTS PER 100,000 FLYING HOURS)

	FY 96	0	1.1	0.8	0.6	0.9	1.2	1.0	0.9	1.0	1.4	2.1	2.0
	FY 97	0	0	0	0.6	1.0	0.8	1.6	2.1				
8 AF	FY 96	0	0	0	0	0	0	0	0	1.2	1.0	1.7	1.5
	FY 97	0	0	0	0	0	0	0	1.2				
9 AF	FY 96	0	0	0	0	0	1.1	1.0	0.8	0.8	2.1	1.9	1.8
	FY 97	0	0	0	1.7	1.4	1.1	2.9	2.5				
12 AF	FY 96	0	3.4	2.4	1.8	2.9	2.3	2.0	1.7	1.5	1.4	3.1	2.9
	FY 97	0	0	0	0	0	0	1.0	1.7				
DRU	FY 96	0	0	0	0	0	0	0	0	0	0	0	0
	FY 97	0	0	0	0	5.7	4.7	4.0	3.5				
CANG	FY 96	0	1.9	1.3	2.2	1.8	2.2	1.9	1.7	2.0	1.8	2.0	1.9
	FY 97	0	3.8	2.6	3.3	2.7	3.0	2.6	2.2				
CAFR	FY 96	0	0	0	0	0	0	0	0	0	0	0	0
	FY 97	0	6.3	4.2	3.1	5.2	6.1	5.3	4.7				
TOTAL	FY 96	0	1.3	0.9	1.0	1.1	1.4	1.2	1.0	1.2	1.1	1.9	1.8
	FY 97	0	1.9	1.3	1.7	1.9	2.0	2.3	2.4				
MONTH	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

*"Mary didn't even have a drink; however, she suffered and died at the hands of her inebriated friends."*

Chaplain Thomas Azar  
35 FW/HC  
Misawa Air Base, Japan

# DEATH The Fruit of Carelessness

**M**ike and Mary were both on active duty, engaged to be married and serving overseas. They often went touring with friends from the same squadron on weekends to explore the local culture. A co-worker and his wife had come along for this weekend trip.

After driving in the rain one evening, while gulping down two cases of beer, their vehicle slid off the road, hit a bridge beam and sent them all over the side of the cliff into the river below. Mike had several injuries to his shoulder and right leg. The co-worker and his wife suffered minor cuts and bruises. Mary was less fortunate. She was thrown from the vehicle and landed on her back, crushing two vertebrae and smashing her skull.

It was supposed to be a 3-day weekend that the troops earned for doing a good job and for not having any DWI's for 6 months. When the call came over the beeper, I rushed to the hospital to provide support for the traumatized victims. They were in shock from the catastrophic car accident which was compounded by all the alcohol they had consumed. Our first conversation wasn't even remembered by any of them 2 days later. As three of the four began to recover, the chapel team worked to support them through the ordeal that was to follow — the legal, medical and emotional outcomes of having to reap the painful "fruits of their labor."

As I continue to explore these cases more

and more, the haunting question continues to resurface: What continues to blindly motivate individuals to drink and drive when the final outcome of death or disability is so inevitable?

What leads one to become inebriated beyond control in order to seize such momentary pleasure without thought for the future? In my counseling cases with drunk drivers, I continue to hear the poor rationale that "I never thought I would get caught," "my friends and I have been doing it for months" or "we thought we were invincible."

In Mary's case, her friends' "goodbye party" turned out to be "a goodbye forever party." She never regained consciousness. Her fiancée and family suffered immensely as they tried to make sense out of this accident. This young, vibrant woman is gone forever. The pride of the squadron's record of 22 mishap-free months ended in the death of one of their outstanding, young troops. The grief, anger and shock was seen and felt throughout the squadron. The irony of it all is that the three individuals who had been drinking survived. Mary didn't even have a drink; however, she suffered and died at the hands of her inebriated friends. We all know the effects of drinking and driving as well as the legal penalties involved; however, many people continue to place their own lives as well as that of their loved ones at great risk because they carelessly think, "It will never happen to me." ■

# CRM

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## "Mobile Training... On the Road Again"



The purpose of ACC's CRM training is to provide ACC crewmembers with performance-enhancing knowledge and skills for improving operational effectiveness and combat capability and preventing mishaps.

As defined by the Federal Aviation Administration (FAA), Crew Resource Management (CRM) is "the effective utilization of all available resources (equipment and people) to achieve safe, efficient flight operations." ACC's CRM Training Program is off and running and is now in its 2nd year. Over 3,600 ACC aircrew personnel at 24 different locations received the baseline CRM course from April to December 1996. This equated to over 97% of the designated personnel in the command; a

remarkable achievement in the face of current deployments and commitments the command is tasked with. This feat in itself emphasizes the importance command leadership has on this innovative training program.

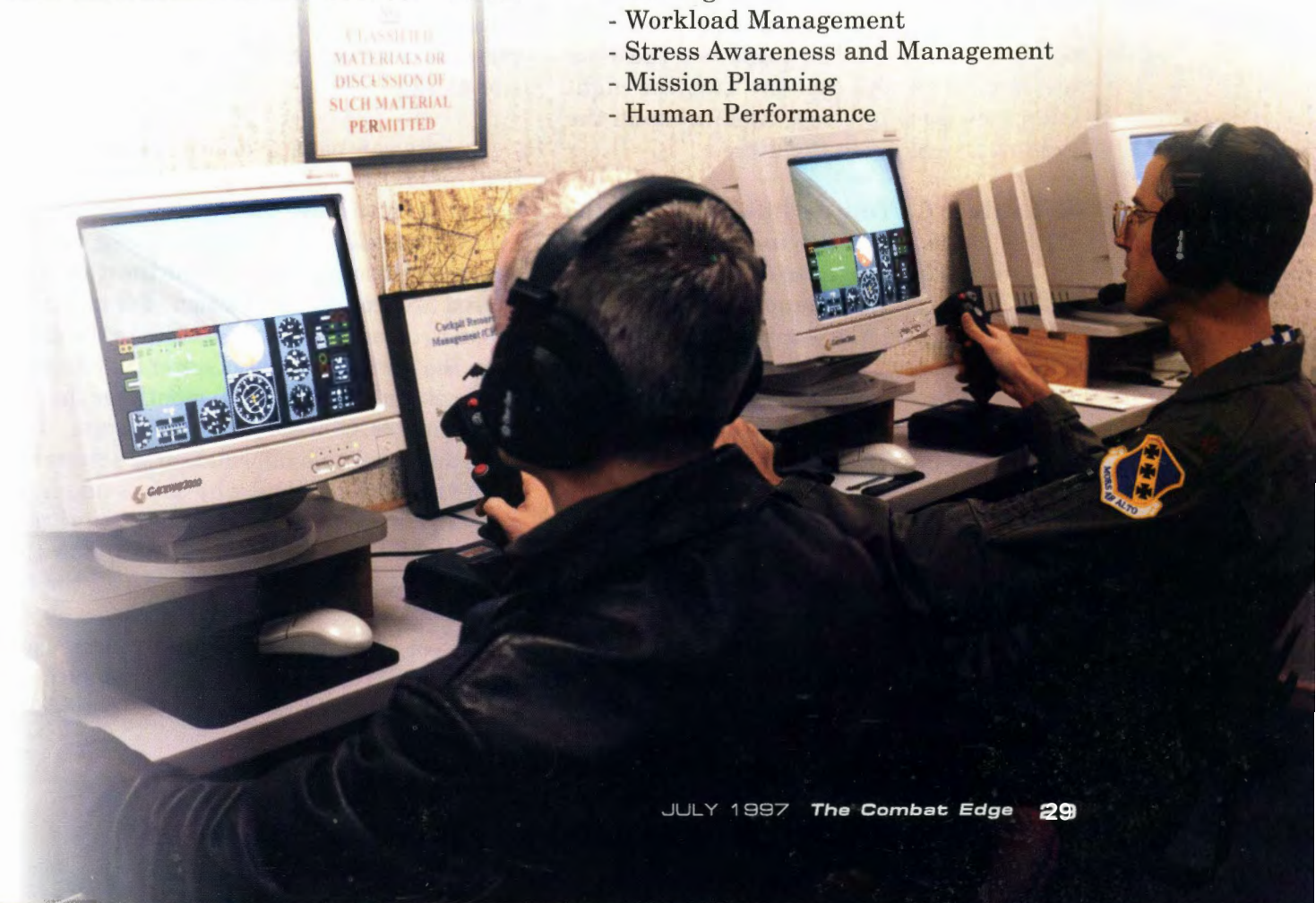
The purpose of ACC's CRM training is to provide ACC crewmembers with performance-enhancing knowledge and skills directly applicable to their roles in the Air Force. It is believed these skills will prove their value in enhancing operational effectiveness and combat capability and preventing mishaps. The ACC CRM program is unlike any other training program the Air Force has ever offered. Mei Technology was selected as the contractor to provide this service to ACC. With Mei's approach, CRM is offered at 24 ACC locations via "door-to-door" service provided by an enhanced Winnebago called a Mobile Training Unit (MTU). This MTU frees up base classrooms and flight simulators for other requirements. Mei Technology also employs the most experienced aircrew instructors for their CRM courses. This alleviates active duty resources in the development and actual instruction of the course. These

instructors have vast war and peacetime flight experience that aircrews can relate to because they have "been there, done that."

The intent of last year's course was to establish a "baseline" training course for the command. This course is now called the Formal Training Unit (FTU) Course, and all new ACC aircrew members going through an ACC FTU school house will receive this course. This year's training offers Mission Design Series (MDS) specific training for most ACC weapon systems. The MDS specific courses are for combat ready aircrews and offer them a wartime mission in an aircraft specific Southwest Asia scenario. This new course is called the Continuation Training Course and is broken down into five segments:

**1. Module 1** - A 10-minute review of the baseline course re-introducing the members to the eight core CRM principles:

- Situational Awareness
- Group Dynamics
- Effective Communications
- Risk Management and Decision Making
- Workload Management
- Stress Awareness and Management
- Mission Planning
- Human Performance



**2. Case Study** - In most cases, the instructor will choose a case study from the community the class represents. However, a case study from another aircraft type can be used to emphasize certain core principles, as well. The case studies reinforce objectives that challenge the crewmembers' experience. They make him/her think about various human performance and human factor issues and how they would impact the decision-making process in routine and non-routine situations. Case studies also allow the crewmember to re-think past situations in an environment that builds on other aviators' experience. These studies take a student back through an actual mishap so they can identify and discuss CRM factors that were involved. This almost always leads aircrews to inject their personal "war stories" related to the topic.

**3. Module 2** - This module places the aircrew member into a mission planning cell. This cell is operating out of Saudi Arabia and is tasked to develop a mission plan of execution for a rescue operation into hostile territory. The students are placed in the cell and are given questions and possible solutions to the problems presented during the module. The purpose of the module is to show the student that the eight CRM core principles are applicable on the ground as well as in the air.

**4. Module 3** - This module focuses on the MDS specific role of the individual weapon systems in support of the combat rescue. It starts with mission planning and goes all the way to mission execution. During this module, aircrews are introduced to several "injected" problems that can occur during the normal course of a mission. Mission changes, maintenance problems, airborne emergencies and even hostile aircraft are thrown at the students in this classroom environment to see what their reaction will be. The students are placed in the scenario and are given questions and possible solutions to the problems presented during the module.

Each module is self-paced. The re-

sponses to the questions asked during Modules 2 and 3 are recorded and are presented to the class via a histogram at the end of each module. There are no right or wrong answers. Aircrew members are encouraged to discuss why they selected a specific answer. If the answers are varied, the discussion between the students is quite beneficial because they are sharing their "tools and techniques" among themselves.

**5. Situational Trainer (ST)** - The ST is used as a tool for the students to practice the tools and techniques that they have acquired during the course and use them in a simulated flight scenario. The ST is not replicated to be a specific weapon system simulator. However, the ST has many of the resources that aircrews use in their own aircraft, i.e., stick, throttle, air-to-air radar and air-to-ground mapping radar. Again, the students are given various "injected" problems that can occur during the normal course of a mission, this time during a simulated flight. Aircrews "fly" this simulated mission as either a formation (fighters) or as a single multi-seat crew (bomber, reconnaissance, or transport aircraft). Scenarios have even been developed for F-117 and B-2 crews to support their unique stealth missions.

In between each of these segments, the instructors use a variety of tips and techniques to drive home the eight core principles for that specific class. Furthermore, the instructors present information to the class that is used to encourage discussion. For instance, the instructor presents statistics to the class from the Air Force Safety Center that August has been the worst mishap month for the Air Force and ACC over the past 5 years. The class discusses this information to determine if there is any trend on why this would happen. The instructors also use these transition periods to relay information specific to the class's background. For F-16 classes, the instructors may want to lead a discussion about CRM tools and techniques that can be used during an F-16 flameout. Again, the purpose is for the instructors to generate a topic of

discussion and then let the class take the ball and run with it.

Instructors and Evaluators (I/E) will also receive a new 1-hour "top off" course this year after they receive their MDS specific continuation training course. These individuals must be strong advocates of the program. The I/E course is designed to improve their CRM skills and to assist them in helping their fellow crewmembers improve their skills.

Development has just begun to include CRM training for mission crewmembers representing the E-3 Sentry (Airborne Warning and Control System), E-8C Joint STARS (Joint Surveillance Target Attack Radar System), EC-130E Hercules (Airborne Battlefield Command and Control Center), EC-130H Compass Call (tactical command, control and communications countermeasures) and RC-135 Rivet Joint (near real-time reconnaissance and electronic warfare) communities. This mission crew CRM course will be developed similarly to the flight deck course without the Situational Trainer. This first course will focus on the basics of CRM to a community that really hasn't been exposed to this type of training in the past. CRM training for these mission crews is planned to begin in late 1997.

It's too soon to tell what the impact of this new course will be. It is very difficult to measure CRM training effectiveness. Obviously,

measuring the reduction of mishaps is not a practical approach! Initial feedback to the course has been mixed. Junior aviators tend to like the course, especially the computer interaction and Situational Trainer. Some experienced aviators have stated that they have been practicing these concepts for years; this course doesn't teach them anything new. Heavy aircraft crews think the course is "basic" compared to some of the CRM training that they have received in the past. ACC's intent with this program was to standardize training and establish a baseline for the Command where each weapon system would receive the same level of CRM training. Then, CRM training would build upon that baseline course for subsequent years.

The ACC Commander, General Richard Hawley, states it clearly in the video course introduction: "To keep this course current and relevant, we need your feedback. Tell us how and where to improve. Use the critiques. Don't be afraid to be specific."

ACC personnel will continue to monitor field surveys to the program. CRM training is here to stay; that is a given. However, the way we train can change. It may be determined that fighters need a 4-hour annual course and heavy aircraft need a full 1-day course. Flight simulators may need to be utilized again as opposed to situational trainers. The bottom line: Aircrew inputs to this program will help shape the focus of the program, and CRM training will continue to improve to keep it in line with the training expectations of "the world's best combat Air Force." ■

"To keep this course current and relevant, we need your feedback. Tell us how and where to improve. Use the critiques. Don't be afraid to be specific."



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