

Volume 3, Number 4

Summer 2010

WINGMAN

Airmen Taking Care Of Airmen

The United States Air Force Journal of Aviation, Ground, Space and Weapons Safety

RPA Safety

Cyber Surety

ESPs Have Gone Hybrid

The Critical Days of Summer Campaign





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The United States Air Force Journal of Aviation, Ground, Space and Weapons Safety

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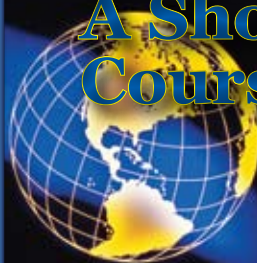
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Correction: In the Ground Safety Special Edition 2010 issue of Wingman, the article "Motorcycle Safety – It's On You!" may leave readers with the impression that wearing bright/reflective personal protective equipment is optional. While it may be optional for the general population, it's mandatory for riders on U.S. Air Force installations. AFI 91-207, para 3.4.2.4.5., states, "Garment and Motorcycle Visibility. Motorcycle riders will wear a brightly colored outer upper garment during the day and a reflective upper garment during the night. Outer upper garment shall be visible and not covered. Wearing a backpack is authorized if it has brightly colored/reflective properties." We thank our "many" observant readers for this catch.



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Summer Safety — The Days of Summer

MAJ. GEN. FRED ROGGERO
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Air Force Chief of Safety Visits Seymour Johnson

Capt. Aaron Reid explains to Maj. Gen. Frederick Roggero what to look for during an F-15E preflight inspection. Capt. Reid is the 333rd Fighter Squadron chief of weapons, and General Roggero is the Air Force chief of safety. (U.S. Air Force photo by Senior Airman Whitney Lambert)

Welcome to summer. Every year in Safety, we beat the drum with our “Critical Days of Summer” campaign, and with good cause. During this season, Airmen tend to spend considerably more time on the road and involved in outdoor recreation. This is the time of year that we lose significantly more Airmen and their families to off-duty mishaps. Many of these losses are preventable and are primarily caused by the failure to perform basic risk management.

Ask yourself the following questions before you do something different. Is this smart? What are the possible outcomes? Is there a better/safer way of doing this? Am I putting myself, friends, family or others at risk? Often these questions fail to be considered in the exuberance of the summer moment, leading to tragic results. Take a few seconds to run these through your head, and don’t be afraid to speak up when you see a fellow Airman doing something different, dangerous or just plain dumb. You may save a life!

This edition of *Wingman* starts off with the “Division in the Spotlight” — Aviation Safety. The division is composed of 43 safety professionals, focusing on aviation mishap prevention and investigation. The article covers how they provide aviation safety support at all levels throughout the Air Force. Following this are the five sections of operations-focused safety articles covering ground, space, weapons, human factors and aviation safety. Many of these articles are “There I Was”-type articles written by individuals who have been involved in mishaps or near-mishaps and wish to share their lessons learned.

I hope you enjoy this edition. We’ve modified our magazine’s format, and we’d like to know what you think. Please provide your input to afsc.semm@kirtland.af.mil. Have a safe summer and remember: Safety is an attitude — get one! ☆☆





The Aviation Well Done Award is presented for outstanding airmanship and professional performance during a hazardous situation and for a significant contribution to the United States Air Force Mishap Prevention Program.

The Aviation Well Done Award is presented to Staff Sgt. Candace Roysdon of the 134th Air Refueling Wing, Knoxville Air National Guard Base, Tenn., in recognition of her exceptional attention to detail. On July 15, 2009, while conducting her daily ramp and taxiway inspection, Sergeant Roysdon discovered an unusual device laying on the taxiway. Relying upon her instinct, she took the piece to Maintenance Control and Quality Assurance where they readily identified the piece as a KC-135R actuated spring tensioner assembly brake part. Maintenance personnel searched the location where the part was found and discovered the remaining pieces associated with the assembly. They also identified the aircraft that had most recently taxied through the area. The schedule pointed to a specific tail number that was preparing to depart for an overseas mission within two hours. Additionally, QA personnel discovered the brake assembly had recently undergone maintenance where the incorrect safety wire was installed. Sergeant Roysdon's actions prevented this aircraft from



experiencing brake failure and foreign object debris to an aircraft engine. Her quick reactions prevented a faulty repair on the aircraft from proceeding on an overseas mission. The outstanding leadership and safety awareness displayed by Sergeant Roysdon reflect great credit upon herself, the Air National Guard and the United States Air Force. 🦅

The Aviation Well Done Award is presented to the crew of Angry 31, 13th Expeditionary Bomb Squadron, Andersen Air Force Base, Guam, in recognition of exceptional performance during an emergency while on a training mission. On April 15, 2009, Lt. Col. John H. Snelling, Jr., and Capt. Robert E. Lamontagne were lead of a two-ship of B-2s supporting a Pacific Air Forces Command continuous bomber presence from Andersen AFB,



Guam, when their B-2 had an unreported failure in the equipment cooling system. They suffered dual failure of the flight/mission control processors, resulting in loss of navigation capability and primary flight instruments, as well as significant degrades to other systems. While burning down fuel, the crew anticipated additional imminent avionics failures and coordinated for landing. Without the aid of primary avionics, the crew landed their stealth bomber at a significantly heavier than normal gross weight. In the face of multiple simultaneous avionics failures, the exceptional performance, systems knowledge and resource management of Lt. Col. Snelling and Capt. Lamontagne ensured the safe recovery of a \$2.2 billion national asset. The outstanding leadership and safety awareness displayed by the crew of Angry 31 reflect great credit upon themselves, Pacific Air Forces Command and the United States Air Force. 🦅

Blue 2

COL. SID "SCROLL" MAYEUX
Chief, Aviation Safety Division
Air Force Safety Center
Kirtland AFB, N.M.



I think the title of our magazine rocks: **WINGMAN!** I believe the wingman is THE most important Airman. I'd say the wingman is even more important than the flight lead, because if the wingmen aren't in place doing their job to the best of their ability, the mission and the flight's safety risk failure. A good wingman can cover a flight lead's shortfalls, but even the best flight leads rarely succeed at doing everyone's jobs if the wingmen only bring their B game.

In the Air Force Safety Center's Aviation Safety Division, I proudly lead 43 magnificent wingmen spread across five branches. However, even though I'm the Aviation Safety flight lead, we are all your wingmen. In this edition of *Wingman*, I am honored to showcase your Aviation Safety Division: our mission, our five branches, what we do, how we've changed and what we bring to your mission. We'll also focus on the Remotely Piloted Aircraft Safety Branch, our newest, stood up last year to directly address our Air Force chief of staff's and secretary's top-level priority to partner with the Federal Aviation Administration and integrate RPAs into the National Airspace System. It's new and exciting stuff.

Being a good wingman is tough. Wingmen can't effectively employ without a solid understanding of what they're supposed to do ... and not do. It's called the "Wingman Contract." Lead goes low; wing goes high. The wingman stays off the radio unless lead is on fire, has lost sight of lead or is down to bingo fuel. The wingman contract manages expectations and builds predictability into mission execution.

So as Blue 2, I have to give our pilot, Cizzo, and enlisted flyer wingmen tons of credit for last year's best-ever aviation mishap rates. You stuck true to the wingman contract as it applies to risk management in aviation. You applied the "back to basics" pillars of compliance and discipline and held each other accountable in the flight debriefs when your performance or basic knowledge wasn't up to your own high standards. Excellent!

Keep it up! As of May 1, 2010, we've had eight aviation flight mishaps for a 0.66 rate per 100,000 flying hours. One mishap is too many, but since we had nine mishaps at this time last year, I'm convinced our wingmen are doing an even better job of covering each other's "6."

All Airmen appreciate a good wingman, so it hurts deeply when we lose one of the best. Air Force Safety lost a good wingman when Lt. Col. (ret) Charles Kowitz passed away on Feb. 13, 2010, in an auto accident. "Beef" Kowitz retired in 2008 as a flight safety officer, where he tackled our first safety policy efforts for RPAs — he built the foundation for today's RPA Safety Branch. He was an aggressive safety warrior, a valued colleague, a friend and a treasured wingman. He was 44, and he left a space in the formation that cannot be filled. Fair skies, Beef — chink, glug, smash!

Fly hard, and fly safe! 🦅

Blue 2's engaged!

Maintenance Spoken Here!

Farewell, Chief Stacy



COL. SID “SCROLL” MAYEUX
Chief, Aviation Safety Division
Air Force Safety Center
Kirtland AFB, N.M.

Bear with me for a moment, gang. Chief Master Sgt. Sandra Stacy normally graces this column with her timeless wisdom, spoken by a maintainer to maintainers. Join me now to say farewell to Chief Stacy as she retires from a 30-year career of maintenance and safety excellence.

Chief Stacy was the aircraft maintenance safety manager at the Aviation Safety Division, Headquarters Air Force Safety Center on Kirtland AFB, N.M. She provided technical, analytical and staff assistance consultation for safety to all major commands for maintenance-specific mishap queries, as well as investigative support for any Air Force aviation mishap worldwide. As AFSC’s single point of contact for aviation maintenance issues and the flight safety noncommissioned officer program manager for all MAJCOMs, Chief Stacy ensured the effectiveness of maintenance-related aviation investigation programs and policy. Additionally, she was the maintenance aviation mishap process representative to Air Force and joint service Class A safety investigation boards. As a valued member of the Aviation Safety Operations Branch, she prepared, coordinated and released mishap report memoranda of final evaluation — the final Air Force position on mishap causes and corrective actions. She

conducted final message quality controls and decided on the adequacy of completed actions during mishap recommendation closure reviews.

Before coming to Kirtland, Chief Stacy served in a wide variety of positions within flight maintenance functional areas, including wing avionics manager, specialist chief, pro super, flight super, operations flight chief, aircraft maintenance unit NCOIC and maintenance super among others. Of her 11 assignments, her last assignment to AFSC was her only job off the flight line. She worked F-4s and F-16s at Luke AFB, Ariz.; Kunsan AB, R.O.K.; Shaw AFB, S.C.; Spangdahlem AB, Germany; Nellis AFB, Nev.; Aviano AB, Italy; and Osan AB, R.O.K. She was hand-picked as specialist crew chief and dedicated crew chief for the U.S. Air Force Aerial Demonstration Squadron — the Thunderbirds.

I haven’t yet picked my new aircraft maintenance safety manager, because no ordinary chief can step in to fill Chief Stacy’s shoes. She pounded the broken ground on three continents as the maintenance investigator for eight high-visibility Class A mishap boards. Frankly, her outstanding leadership and unmatched maintenance analytical prowess contributed directly to the Air Force’s lowest Class A aviation flight mishap rates in history.

And through her words to you in this quarterly *Wingman* column, Chief Stacy cemented her reputation throughout the maintenance community as a “crew chief’s chief” by capturing the essence of the maintenance safety professional. Chief Stacy departs to bigger and better things. We wish her well — she has earned it — but it hurts to see her go.

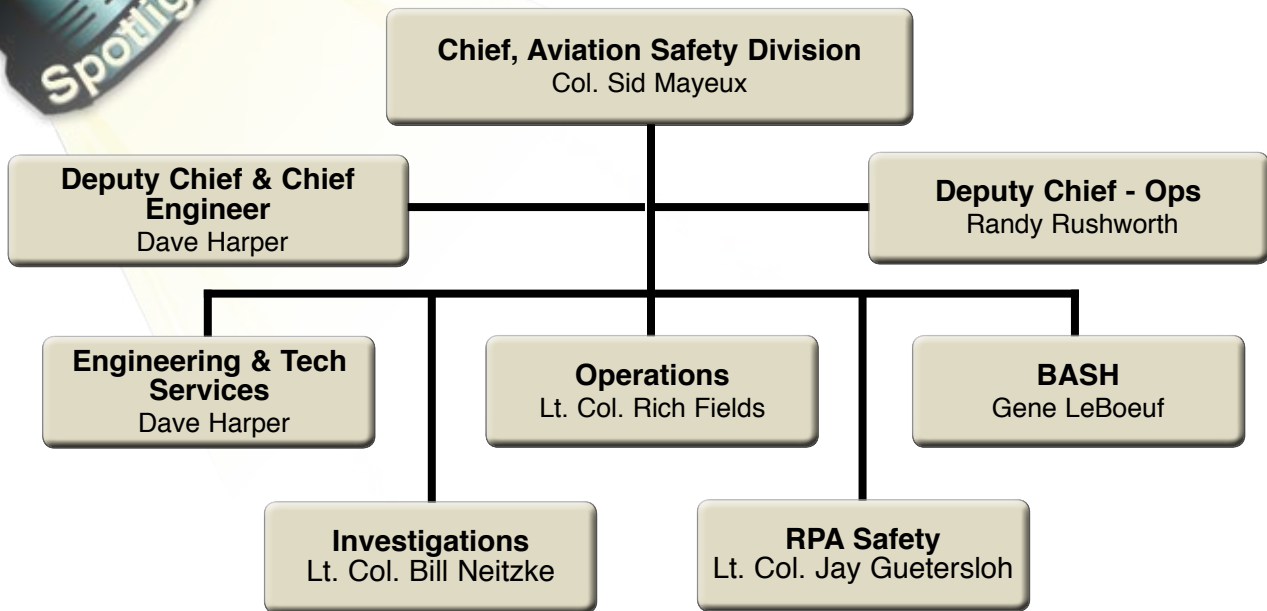
My pledge to Airmen: I will do my absolute best to find a new aircraft maintenance safety manager capable of meeting the high standard Chief Stacy set. Slouches need not apply — I’ll only accept the best, because that’s who just left us.

Good luck, Chief Stacy. You never pulled the chocks without saluting the crew and lovingly touching the wingtip, and every jet you launched came back safely. Thanks for leaving us with a Code 1 jet. 🇺🇸

Blue 2



The Aviation Safety Division



COL. SID "SCROLL" MAYEUX

Chief, Aviation Safety Division
Air Force Safety Center
Kirtland AFB, N.M.

The Air Force Safety Center's Aviation Safety Division, or AFSC/SEF, is the keeper of the Air Force aviation mishap prevention and investigation processes. AFSC/SEF provides oversight and support to warfighters, flying commanders and safety staffs at all levels throughout the Air Force. As the Air Force chief of safety's Headquarters Air Force-level aviation safety staff, AFSC/SEF provides policy, guidance, oversight, education, support and resources. AFSC/SEF's mission is to preserve warfighting capability through prevention of aviation mishaps, injuries and fatalities.

AFSC/SEF includes 43 active duty and Air Force Reserve Command officers, senior noncommissioned officers and Department of Defense civilians, plus contractor teammates. The division is composed of five branches with pilots, navigators, maintenance professionals, aerospace engineers, wildlife biologists and civil engineers ... all coming together in one team to employ and assist the Air Force aviation mishap prevention and investigation programs.

Engineering and Technical Services Branch, AFSC/SEFE

Our Engineering Branch is the Air Force focal point for aviation safety engineering strategies. They provide 24/7 technical expertise for Air Force leadership on

engineering aspects of the Aviation Safety Program. AFSC/SEFE is locked and loaded to support mishap board presidents through on-site or telephonic safety investigation board technical coordination. The Mishap Analysis and Animation Facility resides in AFSC/SEFE, providing world-class download, analysis and animation of recorded aircraft data for mishap boards. Our engineers ensure technical accuracy and completeness of mishap boards' analysis and reports. AFSC/SEFE also conducts special studies, safety engineering projects and research and are key systems safety group members for every Air Force weapons system.

Investigations Branch, AFSC/SEFF

The Investigations Branch is responsible for the implementation, assistance and oversight of the aviation mishap investigation process as it runs its course up to the point the convening authority accepts the SIB's final report. Most of our weapons system subject matter experts reside here and include fighter/attack, tanker/airlift, bomber, reconnaissance, combat search and rescue, special ops, trainers, special airlift and more. Our SMEs review every single Air Force instruction, Air Force manual and Air Force publication related to aviation operations and safety for every weapons system. Per the chief of staff of the Air Force direction, AFSC/SEFF provides specially trained, equipped and experienced AFSC representatives to all Class A mishap boards. We put AFSC rep boots on the ground for all fatality and destroyed aircraft mishaps, plus 100 percent telephonic support for all other Class A and most Class B boards. Our SMEs assist flight safety officers at all levels

with answers to their flight safety program questions and author reams of aviation safety articles, papers and more. When it comes to the Air Force aviation mishap investigation process, AFSC/SEFF's pros are the real "pros from Dover."

Operations Branch, AFSC/SEFO

AFSC/SEFO has one of the toughest jobs in the division — mishap report final evaluation. Once the convening authority accepts the mishap board's report, our Operations Branch takes the handoff from AFSC/SEFF and manages the mishap investigation report staff review and final evaluation processes. AFSC/SEFO wire-brushes Class A and B mishap reports to ensure they meet the Air Force chief of safety's standards for format, completeness and investigative rigor. Commands and agencies across the Air Force comment on these mishap reports. AFSC/SEFO compiles these post-board comments, then assembles an experienced review team from across AFSC to adjudicate the mishap reports with those agency comments. The result: detailed memoranda of final evaluation for the Air Force chief of safety's approval signature, which represent the final Air Force position on the mishaps and "pulls the trigger" across the Air Force on the reports' recommendations. AFSC/SEFO also monitors all commands' reporting, tracking and closing of mishap board recommendations, ensuring mishap prevention actions are either put into action or proper levels of command have accepted the associated risk. Rookies need not apply to the Operations Branch.

Remotely Piloted Aircraft Safety Branch, AFSC/SEFQ

The Aviation Safety Division's newest branch, AFSC/SEFQ, stood up in December 2008 to directly respond to calls from the Air Force Central Command and Air Combat Command commanders for a central Air Force focal point for RPA safety strategy and assistance in mishap investigations. AFSC/SEFQ is responsible for RPA-specific safety policy, guidance and oversight, and the staff addresses and supports RPA mishap investigations. The RPA Safety Branch engages with Federal Aviation Administration, the National Transportation Safety Board, DOD and Headquarters Air Force

for RPA integration into the National Airspace System. They are prime advocates for RPA systems safety, and they lead and support development of RPA risk management programs. Read more about the RPA Safety Branch on Page 20 of this edition of *Wingman*.

Bird/Wildlife Aircraft Strike Hazard Branch, AFSC/SEFW

The BASH team is the Air Force center of excellence for reducing wildlife hazards to aircraft operations. AFSC/SEFW provides bird/wildlife biologist and safety experts to safety investigation boards through expert witnesses and technical assistance. They immediately respond to technical support requests from major commands and wings, including airfield BASH staff assistance visits around the world. The BASH team runs the Air Force bird strike feather remains identification program in conjunction with the Smithsonian Institute. AFSC/SEFW also maintains the single premier database of all U.S. Air Force bird strikes. This data fuels key critical aircrew mission planning tools, such as the Bird Avoidance Model and radar-augmented Avian Hazard Alert System. When the NTSB needed recorded bird radar data for last year's investigation into the U.S. Airways Hudson River bird strike, they came to the BASH team.

In FY09, the Air Force suffered the lowest number of Class A aviation flight mishaps in our history — 17 mishaps, a rate of 0.8 mishaps per 100,000 flying hours. We tied the FY08 record low of only eight destroyed aircraft. The Aviation Safety Division credits that success to commanders and Airmen at all levels who seriously adopted a culture of compliance, discipline and mutual and personal accountability for their risk management and safety. The Aviation Safety Division helps set the aviation safety stage, but Airmen make it happen. 🦅



RMM in the Oven

Anonymous

Let's face it. As aviators, we make bonehead mistakes on a near-daily basis. While most of these are minor, there are times when we look back and say, "I sure was lucky that everything worked out that day." Sometimes we don't share the mistakes because we're afraid of ridicule or punishment. There's the beauty of the safety process. Here, we can share those stories and maybe save the next guy, who might not be so lucky. Here's one such lucky break.

We flew out of a bone-dry, desert base where the temperatures reach 120 degrees, but sits at 15 percent maximum humidity. One day, we were picking up a plane from heavy maintenance at a base in the South during the summer. While it was hot, it wasn't nearly what we were used to dealing with, so we thought nothing of the 90-degree temperatures. Our first mistake was discounting the 90 percent humidity.

Since major maintenance had been done, we had to fly the functional check flight first. We were several days behind schedule, so the FCF turned into a "quick FCF" and ferry back home. All those that have tried this kind of double turn know it's a losing battle to fight against time in this fashion. But, we pressed ahead with the "can-do" attitude.

Our next indication that we should have throttled back came when we showed up to the aircraft — all the maintainers were sitting under the shade of the wing drenched in sweat. It was only 10 a.m.

How could it be so hot? As the pilot, I figured now would be a good time to go into the air-conditioned maintenance building and review the forms while I turned our trusty flight engineer loose to start the FCF preflight.

Most Herc preflights last about an hour, but the FCF profile is much more thorough and can easily run two hours. By the time I walked back out on the flight line, the FE was just climbing back down the flight stairs from a 100-degree-plus flight deck and was as red as a beet. While I paid less attention than I should have at the time, he had clearly stopped sweating long ago. Instead of his boisterous self, he had a much more reserved demeanor. But, as a true “mission hacker,” he pulled an about-face and climbed back into the cockpit so we could get the flight underway.

Instead of the recommended 30 minutes of work/30 minutes of rest cycle that the maintainers were using, the FE had pulled two hours straight and was strapping in for the three-hour FCF. I had thought ahead and handed him a measly 8-ounce bottle of water that I brought from the maintenance building.

While the FCF is a busy profile, the FE received a short reprieve as we got a face full of air conditioning at altitude. It was short-lived as we transitioned back down low, depressurized and sent him to the back for the gear swings. By the end of the sortie, he looked like he'd been hit by a Mack truck. The trouper kept going.

We had maintenance review the forms and sign our exceptional release, or ER, on the ramp. Quality Assurance did a bang-up job of quick-turning us. All the FE had to do was spend

another 45 minutes
baking in the 3 p.m. sun.

About halfway to our next station, the FE finally gave up the charade and let us know that he was “dog tired.” We had all skipped lunch, but somehow I think it had taken a much heavier toll on him than the rest of us. Despite some water here and there, it

was clear that his tolerance for environmental conditions had been surpassed long ago.


Again, we were lucky. We made it to our destination with no problems, landed and went out for some much needed calorie and fluid replacement. Hindsight taught us a better lesson. Not only could we have injured our engineer, but we put the entire crew in greater danger than the mission required. Think risk management.

Crews need to be at the top of their game. If anything is going to happen that requires calm heads, teamwork and logical action, it'll most likely happen right after major maintenance. The highest chances of losing engines or experiencing gear malfunctions is after the aircraft have been sitting for three months getting wrenched and hammered. That's why the FCF takes a specially qualified crew. Had we experienced a major malfunction, the FE might have been halfway down that slippery slope of no situational awareness. When all he can think of is how tired and thirsty he feels, he's not watching the gauges that we rely on him to monitor.

This was not the FE's fault; it was a crew mistake. We all saw the writing on the wall. Any of us should have called “knock it off” and, at a minimum, taken a lunch break to get the FE back indoors, rehydrated and recaged for the mission. The smart choice would have been to take a step back, reevaluate the crew's capability and push the second turn to the next day.

There's always a perceived pressure to push ahead and get the mission done faster, but there's not a commander out there who will tell you to do that at the expense of any of his or her people. While it's not always apparent at the time, leaning forward is not always the right way to lean.

As a member of a crew who made a mistake but got lucky, I encourage all crew members to look at their fellow Airmen and assess the risks they're walking toward. Whether it's heat stress, fatigue or the 24-hour bug that's going around, keep an eye on your crew and don't be afraid to help them out. Do a quick risk management assessment and ask, “Is this worth the risk?”

Work hard, but be safe in the process. 

4,000 Feet Remaining — Still Floating Down the Runway

Anonymous

It was going to be a great TDY. After a direct flight to Peterson AFB, Colo., and an entertaining night out in Colorado Springs, we were scheduled for a gentlemen's showtime the next morning. We were planning to show off the capabilities of the mighty KC-135E for some International Air War College students with an F-4 air refueling on the way down to Maxwell AFB, Ala.

We had an experienced crew that day back in the summer of '91. The pilot was an instructor pilot and a flight commander; he had "next squadron commander" written all over him. I was still a first lieutenant co-pilot, but we had just spent several months in Saudi Arabia for Operation DESERT STORM, and I felt ready for anything. So far, this War College trip had been a lot of fun, and that trend looked like it would continue.

The takeoff and climbout from Colorado Springs was uneventful. We were cycling the War College students in and out of the cockpit and really enjoying the flight. Did I mention both pilots became completely engrossed in a conversation with an Indian air force colonel's stories about flying MIG-23s? Did I mention that we completely forgot about getting clearance to delay in the military operating area while waiting for our receivers? How about that altitude block for the refueling? Nope; we missed that one, too.

We recovered quickly, and I'm pretty sure the students never knew the difference. The fighters arrived on time and cycled on and off of the boom so that all of the students could get a good look at the Phantoms. The fighters got their gas and departed with the usual afterburner/aileron roll goodbye reserved for VIPs.

The cruise portion of the flight went by quickly. As we started our descent into Maxwell, the pilot informed me that he was going to do a 40-flap

landing so he could "grease it on" and "really impress the students." We were used to doing 40-flap landings on our home station's Strategic Air Command-standard 12,500-foot runway. We didn't practice 50-flap landings very often, since flying on speed and getting a smooth touchdown is very difficult. The flare and power pull have to be timed just right, because when the throttles come to idle, the jet stops flying and lands. If you're still 2 to 3 feet above the runway when those throttles come back, your spine and back side pay the price. That wouldn't impress anybody, so a 40-flapper it was.

Maxwell's runway is only 8,000 feet long, the minimum length a KC-135 was authorized to land on without a waiver. A 40-flap landing means slightly higher approach and touchdown speeds. We loaded the automatic terminal information system figures into the fuel saving and advisory system and let it calculate our landing data. The 40-flap total landing distance was less than the runway length, so we were "go" for landing.

The pilot flew a very smooth instrument landing system approach and was only a few knots fast. As we approached decision height, he announced that he was "visual for landing." The round out and flare were normal, and the landing picture looked good. The throttles still hadn't come back to idle, and I remember thinking that he was probably holding on to the power just a little bit longer to get that really smooth landing. As expected, we could barely feel the main gear touch down, and I was smiling and nodding my approval. Then I noticed a black rectangle with a big white "4" on it passing by my window. *What? Only 4,000 feet remaining? Did we really just float halfway down the runway?*

I quickly announced, "4,000 feet remaining" over the interphone and moved my left hand behind

the throttles to guard them for what I was sure would be a refused landing and subsequent go-around. I was mentally starting through the “pickle, power, speed brakes, flaps, gear, flaps” mantra that describes a KC-135 go-around.


Imagine my surprise when a gloved hand quickly ripped the speed brake handle back to 60 degrees, yanked all four thrust reverse handles up through interlock and pulled them all the way aft. The wheel brakes were being applied heavily as all four engines were winding up to 100 percent revolutions per minute in full reverse. As my shoulder harness locked, I started calling out our airspeed and distance remaining. I had never heard the thrust reversers make that much noise before, so I’m sure I was shouting into the interphone.

We came to a stop right at the very end of the runway. I couldn’t see the big white stripe; it was under our nose. I’m sure the students were now very impressed with our landing, since their personal belongings and in-flight lunch boxes were now piled against the galley and cabin door. Anything not tied down had launched forward during our smooth touchdown/maximum effort stop. The pilot never said a word about the landing and thankfully neither did the students.

As I’ve progressed up through the ranks of aircraft commander and IP, I’ve briefed the “sanitized” version of this story to our new pilots as a classic example of what not to do. We allowed our

passengers to become distractions and missed getting our refueling clearances. Who was visually clearing for traffic in those pre-traffic collision avoidance system days while we were both turned around chatting? I was a “co-pilot syndrome” case study as I watched my pilot fly above approach speed, hold his power and land way down an already short runway. I just sat there — fat, dumb and happy — and didn’t say a thing until that distance remaining marker flashed by. Then I just announced what the marker meant, not “4,000 feet remaining — go around!”

Thankfully, our flight ended without incident. We taxied to parking and called it a day. I mentally filed this one away in my “aviation lessons learned” folder. Several years later, we heard about a C-130 that went off the end of a runway in South America and suffered three fatalities. Only then did our Dash-1 procedures change and require us to brief our planned actions if we don’t land in the touchdown zone. This procedural change was very much for the better, and we’re a lot more spring-loaded to refuse a landing and go-around now than we were back in 1991. Cockpit resource management has also been introduced and has made our boom operators a more integral and involved part of the crew.

Sometimes I wonder what would have happened if we would have immediately shared this story with a larger audience. Maybe it would have reached the C-130 community and a certain crew would have done something differently down in South America. 



CAPT. EVERETT EAVENSON

314th Air Wing
Little Rock AFB, Ark.

I was a formal training unit evaluator navigator who trained C-130 students in the fine art of tactical airlift. On a beautiful, summer day in Little Rock, Ark., a cold front had blown through, so it was only in the mid-80s. That's real cool for this time of year. The sky was clear except for a few high-level clouds. The crew complement for the day was one student pilot, a weapons instructor course graduate instructor pilot, evaluator flight engineer, evaluator navigator and an evaluator loadmaster. The student pilot was somewhere around his third ride. The profile was a five-hour tactical low-level sortie where the student pilot was going to complete some of his formation day-visual airdrops.

It was a normal 4:50 a.m. showtime for me to begin the flight planning. As the rest of the crew showed up, I was excited to see that there was only one student on our aircraft. It doesn't often happen for an FTU aircraft to have this much experience on board and have only one student. Our aircraft didn't have any maintenance issues, and we headed out on our "SKE-VIS-SKE-VIS" profile. We were on the wing for the first station-keeping-equipment route. It went by as advertised; the airdrop and recovery were vanilla. The formation transitioned from SKE to visual procedures, and we pressed out on a training route that all of the permanent party personnel knew by heart. Around the route, we get into some rough terrain with ridgelines and small mountains. The crew instructors were familiar with the terrain, and we

did a thorough crew brief to make sure that everyone, including the student pilot, understood the routes and airdrops to be accomplished.

The IP, as a WIC graduate, had a high level of knowledge concerning tactical flying maneuvers. He had been discussing several of these maneuvers with the student pilot since the crew brief and decided to have his student demonstrate one on this route. As the aircraft rolled wings level, we headed east down a wide valley at about 800 feet above ground level toward our pre-IP waypoint. The IP asked for a demonstration, and the student started his turn to 60 degrees. As he reached the bank, he executed a 2-G pull. The crew noticed it was a pretty weak pull, and the IP discussed it with the student. Since we were only a third of the way down the leg, he asked the student pilot to try again. The student did better this time. For his experience level, it wasn't that bad. The IP then decided that he needed to demonstrate the maneuver. In hindsight, it's generally better to demonstrate before making the student attempt the task.

What the IP said next is the punch line for this whole story: "Watch this!" He actually said that, and we let him get away with it. At 800 feet AGL, he whipped the plane into 60 degrees of bank and then pulled toward 2 G's. About the time that he got it to 2 G's, the tail of the aircraft began to porpoise, and we swapped ends. The plane had just gone from positive G's to negative real fast, all in a left bank. The aircraft started losing altitude.


Aviation

Wingman Watch

As the navigator, it's my job to be standing in the window, clearing for terrain and navigating the plane. I went from being planted firmly in my flight boots to floating in the air. As the aircraft went into negative G's, the IP was tossed up into his shoulder straps and raised his hands in the air (as if he was on a roller coaster), letting go of the yoke. As I was floating above his right shoulder, I stretched toward the flight controls. At the same time, the engineer was calling out the engine instruments. If we had been unlucky at that moment, we could have lost a motor. He noticed my hand and realized the situation. Instantly, he was back on the yoke and rolled us wings level. We all saw the trees fast approaching, and he yanked back, putting positive G's back on the aircraft and slamming me to the flight deck. Since everything up front that wasn't strapped down was floating during the negative G situation, I was buried as I hit the ground with most of my gear, as well as equipment from under the navigator desk.

As the aircraft climbed out of the valley toward minimum safe altitude, I asked if everyone was OK. A weak reply from the back of the aircraft said, "No, knock it off." I told the IP that I was going off headset to check on the loadmaster. Normally, the parachutes are hanging on the wall in the back. As I started toward the stairs, I noticed that all of the chutes were stacked upside down at their base. I stepped down

onto the chutes and scampered to the back of the aircraft. I found the loadmaster hanging upside down about 7 feet in the air. He had gotten his foot stuck in the litter stanchions up against Flight Station 245. I immediately helped him down, and we got his boot off to check his ankle. It wasn't broken but was twisted pretty bad. He said he would be fine and could still run his checklists, so I went back up front. We got a vector back to the base and terminated the mission for the day. The crew rallied and discussed the situation with the director of operations. We really didn't have a clue as to how the aircraft swapped ends like that, but the pilot thinks that his glove got caught in the elevator trim, putting it full down.

As a crew, we discussed the phenomena known as "Watch this" and how students need to learn how to crawl before they run. The new student pilot had no experience that would have helped him back up the IP. It was a huge lesson for us. We had a high-time crew and let our guard down. We were a bunch of instructors from the FTU who were able to go out and fly with minimal student training to accomplish this lesson of complacency hit home for the members of that low-threat tactical low-level mission ... I promise you. 

... This!



Striving Perfection

Anonymous

There I was, passing through 2,000 feet. Directly off my left wing was another T-6 on a collision course with my airplane. Thank goodness for the naval aircraft collision warning system, a poor man's traffic collision avoidance system, that gave me a timely cockpit warning of an impending conflict. I immediately initiated a climb to deconflict our flight path. After a rush of adrenaline, I leveled the aircraft at 5,000 feet and got established on the outbound radial for our departure routing. I transferred the aircraft controls back to the student pilot in the front seat. How had I almost collided with another trainer on initial turnout from the pattern?

As with most mishaps, or potential mishaps, looking back there were a couple of crucial mistakes that had been made earlier on to set this event in motion. My student was in the early pre-solo contact phase and, as often happens, had misunderstood the departure procedure. We should have turned out of the traffic pattern and, once clear of the overhead traffic, climbed out at 180 knots. Instead, we accelerated to 220 knots at 500 feet above ground level. I discussed the proper procedures with my student, who believed he had to wait until he had the required distance measuring equipment reading from the field to climb and turn to parallel outside downwind. By the time I corrected the student, we were at the DME for the turn. In standard student fashion, he raised the nose, but failed to climb aggressively enough

to maintain 180 knots, tech order climb speed, putting us square in the visible flight rules entry/breakout area and altitude. In the high-density training environment, I delayed direct instructor pilot intervention in an attempt to allow the student to correct. The ensuing conversation further delayed the proper input.

As a crew member and instructor, when you notice a deviation, especially during a critical phase of flight, you have to make an input to correct the deviation. I delayed too long. Thankfully, the NACWS gave me the necessary time to spot the other aircraft and make a correction. Technology helped me in the cockpit that time, but you cannot always rely on it, nor can you trust the student to be using a proper scan. Keep your head on a swivel and teach your students to do the same.

The other links in the safety chain that day involved the environment and a crucial interruption in my normal habit patterns. It was your typical 95-degree-plus summer afternoon in Mississippi as we stepped to the aircraft. Once the forms and cockpit were inspected and set up, I followed my student around the aircraft as he performed his preflight inspection. With the sun beating down, I quickly had drops of sweat rolling down the lenses of my flight glasses. Unable to see, I cleaned

ng for ction




off my glasses and stowed them in my G-suit pocket. Normally, I would have left my glasses in my pubs bag with my in-flight guide. Finishing the preflight, we both hopped in the aircraft and proceeded to go through the strap-in and before-start checklist. Helmet on and canopy closed, the T-6 purred to life, as did the air conditioner, and we taxied out to the active runway.

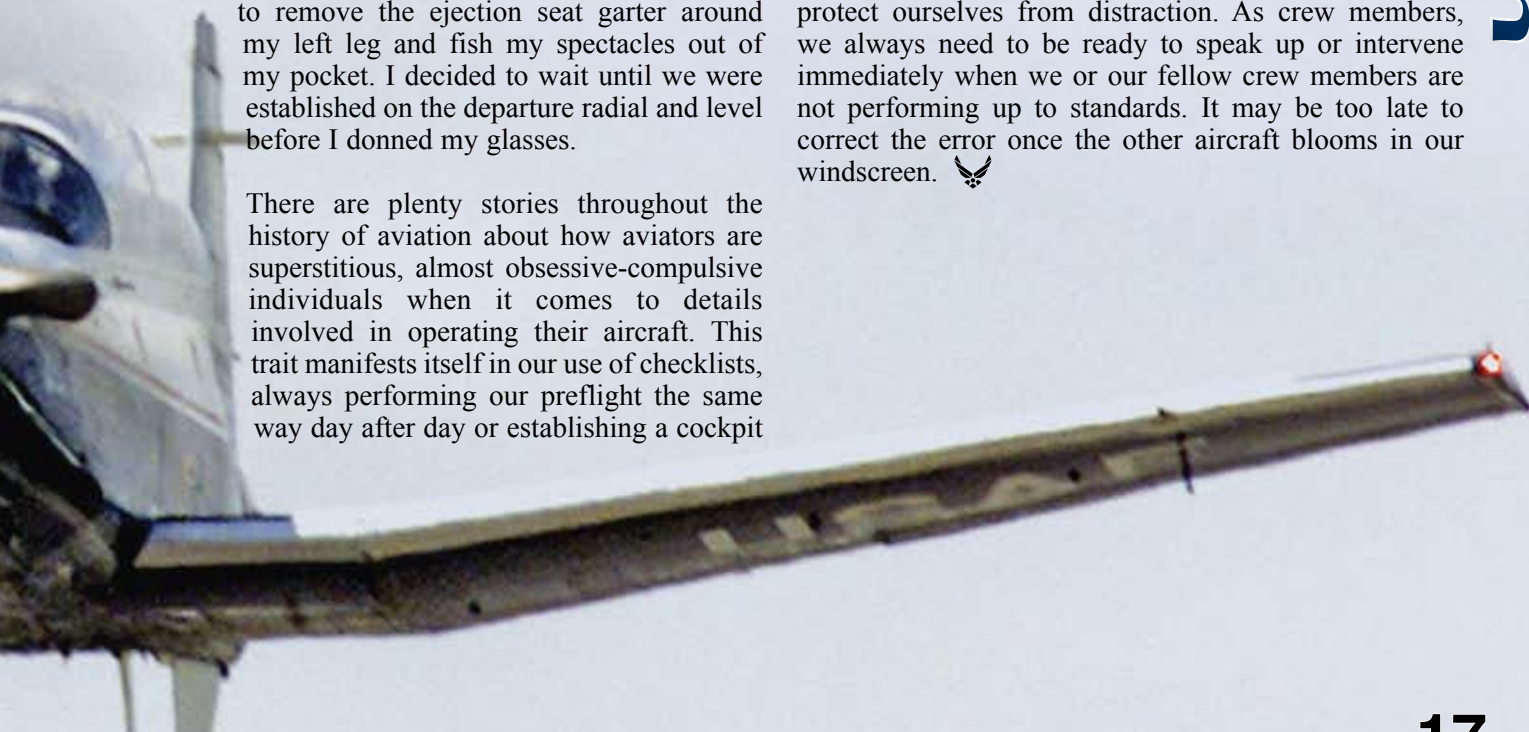
With all of our checks out of the way, we were ready to tackle another sortie of aux field patterns and military operating area stalls and falls. As we accelerated down the runway, I watched a formation of T-38s take off from the center runway. I thought, "Those Talons look fuzzy." It dawned on me that my glasses were still in my G-suit pocket. Great. Now that we were airborne, there was nothing I could do until we got to a safe altitude to remove the ejection seat garter around my left leg and fish my spectacles out of my pocket. I decided to wait until we were established on the departure radial and level before I donned my glasses.

There are plenty stories throughout the history of aviation about how aviators are superstitious, almost obsessive-compulsive individuals when it comes to details involved in operating their aircraft. This trait manifests itself in our use of checklists, always performing our preflight the same way day after day or establishing a cockpit

flow. When we get distracted from our normal routine, it can often result in missing a checklist item and getting out of sequence in our behavior patterns. These missed steps at times are mundane omissions that don't result in a mishap. On another sortie, it may be the difference between recovering the aircraft safely and being another mishap narrative on what not to do.

It's our charter as professional aviators to strive for perfection. This is certainly a lofty goal. Our reliance on well-enforced habit patterns helps us. We must guard ourselves against anything that interrupts our normal flow. Preserving the sanctity of the briefing bubble from nonflight-related interruption is one example of how we protect ourselves from distraction. As crew members, we always need to be ready to speak up or intervene immediately when we or our fellow crew members are not performing up to standards. It may be too late to correct the error once the other aircraft blooms in our windscreen. 

Aviation



Integrit

Anonymous

In the spring of 2007, I was a specialized undergraduate pilot training student flying the T-1A Jayhawk. This aircraft had a relatively safe track record. Most of my flights were quite uneventful, other than the plane's lack of maneuverability — quite noticeable due to the use of spoilers and lack of ailerons. The plane would turn, but it took some strong inputs from the pilot on the yoke.

Lack of visibility was also an issue with the aircraft. You needed to put the window shade up in the back to give you a good cross-cockpit view of the runway and airfield if you wanted to fly a great visual pattern.

The aircraft had noticeably stubby landing gear and could really take a beating as students landed pretty hard on a daily basis. The T-1A was a fun aircraft to fly and was reasonably forgiving, although nailing a smooth and perfect landing always seemed to be quite challenging as it generally landed pretty firm.

A typical sortie was to take off from Laughlin AFB, Texas, and fly instrument approaches into neighboring airports a few hundred miles away. Once we arrived at the airports, we'd fly multiple visual patterns to get a good feel for the crosswinds, since Texas had plenty. On the ground, we'd stop, get lunch, do a student swap and fly the second half of the sortie to another location and then back to Laughlin in the afternoon.

On this particular sortie, we had planned to go to Abilene, Texas. I sat in the jump seat for the first half of the leg, and another student flew with the instructor pilot in the front. We flew a few instrument approaches into Abilene and then decided to fly patterns. We were all looking forward to lunch, but wanted to make sure that we used up the appropriate time before putting the aircraft on the ground.

As the morning went on, I got the bright idea to call for a landing contest. I particularly wanted to challenge this IP as he seemed to always have something to challenge me with. We decided that we'd fly overhead patterns to a touch-and-go and by general consensus choose a victor for the smoothest landing.

The student in the left seat decided he would take the first landing. It was uneventful as he pulled off a smooth touch-and-go. At this point, we decided to do a seat swap. I took the front seat with the IP, and he asked me if I wanted the next landing.


I declined since I wanted a few minutes to get my head in the game. The IP was going to take the next landing. He pulled into the

overhead pattern, rolled the aircraft 30 degrees and pulled very tightly to the field. After he rolled out, we both noticed he was going to be too high and tight to pull off a typical off-the-perch descent profile. We still configured the aircraft and lowered the gear. When we rolled out on final, we were on center line but were at least 400 feet higher than we should have been. Without a lot of options, the other student and I yelled, "Slip it!" This wasn't a common thing to do in the aircraft, but wasn't something against our regulations. He put the aircraft in uncoordinated flight, causing us to drop fast. Although I didn't notice it at the time, he wasn't carrying more than a few knots above our approach speed, which I concluded caused our incident. He held the slip in much longer than I was comfortable with, but with a typical student/IP relationship, I kept quiet as I trusted his skill level above mine.

ty First

As we approached 100 feet from the ground, the IP took the aircraft out of the slip and quickly transitioned into the flare. The aircraft's speed began to diminish quickly. He pulled back to flare, and the last time I looked at the gauge, we showed more than 10 knots below our approach speed. Noticing a bad situation unfolding, the IP threw in power, but it was too late. The aircraft stalled about 40 feet above the runway and fell quickly. We hit the runway hard and bounced about 20 feet off the runway. Before I could even react, the aircraft had bounced two or three more times and began to veer to the left side of the runway. The IP put in max power and corrected with the rudder. He pulled the aircraft back into the air, and we were flying again. At this point, we made another mistake and put the gear back up.

Looking at the aircraft, there were no visible signs of damage to the gear or tail. I could tell that the IP was embarrassed about the situation as he started to do what I think a lot of us do when we mess something up: doubt the situation. He began to justify the situation by saying that the landing didn't feel as hard as it read in the aircraft and, since he didn't see any signs of damage, nothing was going to happen when maintenance looked at it. I could see that he was starting to carry a lot of weight on his shoulders as he contemplated what could happen to him. I thought the situation through and suggested we call maintenance back at Laughlin as this would protect him, especially if anything was found wrong with the aircraft or we had difficulties on the last leg of the trip. It took him a while to concur, but he finally mustered up the courage to do the right thing and call Laughlin. Maintenance listened to the situation and told us to bring the jet back for a full stop.

We felt better for calling, then went to lunch and, of course, made fun of the IP. We flew the aircraft back home, pulled the gear up as we were instructed and were quite grateful that the gear went back down again. Maintenance was ready to receive the airplane and took the jet. As a student, that was the last I heard about it. Three weeks after the incident, I was walking down the flight line after a sortie and saw the same tail number sitting there and, to my surprise, it had brand new, shiny landing gear! I was glad that we had made the right decision and reported what we'd done as we could have affected the lives of future pilots flying that same aircraft. 

With the situation over, we all took big breaths and looked at our aircraft. On my side of the jet was a G meter that we would reset on every flight. I looked over at it, and it said 4.4 G's. Not a very good landing. As we talked about what happened, it was evident that we probably should have kept the aircraft on the ground after the hard hit and not have brought the gear back up.

I took the controls for the final landing and put it on the ground for a full stop. It wasn't as good as the first student's landing, but we were done for the morning and were all happy at that.

RPA Safety

MAJ. MIKE CONTE

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In December 2008, the Remotely Piloted Aircraft Safety Branch in the Aviation Safety Division became the Air Force Safety Center's newest organization. The Air Force chief of safety gave this new group a three-fold plan:

- Generate operational and strategic RPA safety policy.
- Support major command and warfighter RPA investigations.
- Provide functional RPA safety capabilities and mishap prevention in support of Air Force and Department of Defense missions to safely integrate RPA operations within the national airspace and global theaters of operations.

The Air Force has been flying RPAs for close to two decades, but there has been no formal RPA expertise at AFSC. It takes a team of safety professionals to normalize RPA safety and execute the chief of safety's plan. The RPA Safety Branch consists of a branch chief, assistant branch chief, RPA subject matter experts, propulsion/avionics/system safety engineers, an air traffic control/airspace SME, analysts and a human factors expert. At their disposal is a wealth of AFSC knowledge, as well as an extensive Air Force Safety Automated System, or AFSAS, mishap database.

To begin, the RPA Safety Branch is constructing proactive operational and strategic RPA safety policies. They have added specific RPA guidance to Air Force Instruction 91-204, *Safety Investigations and Reports*, and are involved in the current rewrite of Air Force Manual 91-223, *Aviation Safety Investigation and Reports*. The guidance isn't limited to safety-specific instructions. The group is taking a close look at current U.S. Air Force RPA training syllabi, monitoring courses and suggesting where to add lessons learned from mishap investigations and flight safety officer experiences at RPA wings. The branch is constantly looking at ways to prevent future mishaps through training.

The second part of the chief of safety's direction is to support the MAJCOM and warfighter RPA mishap investigations. The RPA Safety Branch has individuals trained specifically to support safety investigation boards. They give RPA SIBs unprecedented access to systems and safety experts. They also provide telephonic, Web-based and in-person support. During SIBs, the group lends their expertise with the process and system SME knowledge. They also track SIB progress. These efforts lead to highly accurate reporting of mishap findings, causes and recommendations. Their involvement streamlines the memoranda for final evaluation process. Think of the MOFE as a final report quality check with a 2-star general's signature. To close the safety investigation loop, the branch looks at all RPA mishap recommendation requests for closure. Before a recommendation is closed, they look at requests and insure the intent of each recommendation is met.

The last part of the plan has perhaps the highest visibility. The RPA Safety Branch isn't the lead agency for National Airspace System integration but is the Air Force Unmanned Aircraft System task force's welded wingman, supporting efforts through education, data gathering and analysis. They are actively engaged with Air Force Central Command area of responsibility safety offices to track and prevent mishaps, including hazardous air traffic reports. They are helping operators develop procedures and perfect processes in order to mitigate the risk of midair collisions. The group provides insight to all facets of RPA functions and challenges while helping to lay the groundwork for safe RPA operations.

AFSC's RPA Safety Branch is looking forward to what the future holds for remotely piloted aircraft. ➤



Generation M

Drinking Responsibly

JAMES RYAN JARRELL

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What attracts the Generation M population to weekend binge drinking?

The answer is simple: we think it's fun. We know it's bad for us. We see the trouble it can get us into, but we do it anyway. My generation must look at alcohol consumption as something far more dangerous than it's portrayed. According to the Robert Wood Johnson Foundation, more than 100,000 deaths occur each year because of excessive alcohol consumption. Direct and indirect causes of death include drunken driving, cirrhosis of the liver, falls, cancer and stroke.

There are claims that the number of deaths from alcohol consumption is rising rapidly each passing year. To fight this deeply stemmed problem, we must first realize that alcohol has become a social norm within the United States and is so intertwined with our culture that the problems alcohol consumption cause are being thrown by the wayside. A good example of this can be seen at universities across the country. Alcohol has become so much of an integral part of the university culture that many school presidents are said to be afraid of acting out against it. Some fear retaliation from the student body. This makes me think we can't truly determine the best way to stop underage drinking or stop those in their 20s from abusing alcohol. We can create policies and make

underage drinking penalties harsher; however, in the end, it won't resolve the current problems.

The fact that alcohol can be easily obtained could indicate it may be better to educate individuals on how not to abuse alcohol rather than taking away their rights to consume it. People must take responsibility for any activity they participate in. They must also understand that younger generations are sometimes misinformed. Lack of understanding when consuming alcoholic beverages can lead to devastating effects.

The National Highway Traffic Safety Administration reported 11,773 alcohol-impaired driving fatalities in 2008. The NHTSA also reported that traffic crashes have been the greatest single cause of death for persons ages six to 33. About 45 percent of these fatalities involved alcohol-related crashes.

Inexperienced drinkers have also been found to fall into more cases of death by alcohol poisoning. The fact that inexperience comes into play when drinking means that younger generations need to be even more aware when consuming alcohol. If we can't stop them, we must help them at least understand the safety risks involved when they make the decision to drink alcohol. ☛

Sources:

The Robert Wood Johnson Foundation, "Substance Abuse: The Nation's Number One Health Problem," February 2001

Alcohol Statistics/Alcohol Facts, http://www.myaddiction.com/education/articles/alcohol_statistics.html

National Highway Traffic Safety Administration, <http://www.nhtsa.gov>

Remembering

MAJ. DAVE LAFRANCE
139th Airlift Squadron
Stratton ANG Base, N.Y.

In 2007, I was a LC-130 pilot supporting science missions in Antarctica and Greenland. Flying full time for the New York Air National Guard was busy enough, but I was also supporting the dreams of one of my three children.

My son, Connor, was the current American Motorcyclist Association national champion in dirt track racing and had transitioned to road racing, catching the eye of numerous factory teams. We traveled with a 16-foot race trailer that had bikes set up for any type of racing: dirt track, supermoto, road racing and motocross. The more successful Connor became, the more we were on the road competing. As any dad would, I equipped him with the best safety gear that could be purchased. With corporate sponsorships for helmets, boots and leathers, Connor was outfitted as well as any professional rider out there. I also ensured he received the best training available. Connor attended American Supercamp and the Penguin Road Racing School; both are schools that teach proper riding habits on and off the track.

In September 2007, Connor began his first days as an expert dirt tracker. He had the opportunity to race the Harley-supported, 2009 future national champion, Jared Mees. Connor, at 14 years old, lined up against

the factory rider and beat him not once, but twice! He was also undefeated on his 450 racing in the AMA National Supermoto series. We knew he was on the road to great things in the sport of motorcycle racing.

Also in September, we accepted an invitation to try out for the Red Bull Rookies Cup, a new series that would enable young road racers to compete on the national AMA circuit and race factory-prepped KTM 125GP bikes. The week before his test with Red Bull, we headed down to Barber Motorsports Park in Alabama to familiarize Connor with the track. Connor had never raced there, and we wanted to have him familiar with the track before the test. He was out on the track with another young phenomenon, Colombian Tomas Puerta. As Connor entered a chicane, he sat up and looked back for Tomas. Connor raised his arm to signal he was slowing. When he turned his head back, he also turned the handlebars, taking him off track and crashing into guard rails. At age 14, Connor passed away as a result of his injuries.

Why the story? I wanted to share three things with all riders out there:

- 1 Wear proper safety gear — it can save your life! Connor had the best safety equipment available. As a racer, he tested his equipment often, and we replaced it. The worst injury he had ever received previously was a broken thumb.
- 2 Get proper training. Take a Motorcycle Safety Foundation course and participate in a track day. What you learn could equip you to prevent a crash.
- 3 Remain vigilant — at all times! Connor's momentary break in concentration caused his crash. As a fellow street rider, we have many more obstacles to worry about than obstacles on a racetrack. Always keep your situational awareness about you and try to anticipate what may happen next.

As my son would sign his weekly racing column — *Hold it Wide Open!* 🦋

Ride Safe!

Ground



Connor

WE KNEW
HE WAS
ON THE
ROAD TO
GREAT
THINGS ...

RIDE
SAFE!



Ground



Alcohol, Fatigue and What Almost Was

SENIOR MASTER SGT. TERRY L. TODD
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Rarely are we afforded the opportunity to hear from an individual about a near miss that could have taken the life of an Air Force member due to a lapse in judgment. This story, from the perspective of a spouse, stands as a constant reminder that the decisions we make in our lives not only affect the person making the decisions, but family members as well.

It was 2 a.m. when I was awakened by a knock at the door. I reached for my robe and began walking toward the entryway. As I got closer, I could see the image of a man through the glass. He was a very tall man wearing what appeared to be a police officer's hat. I asked, "Who is it?" He responded, "Police, ma'am; may we talk to you?" It was as though I was living in some type of time warp. My mind immediately slipped back to the stories I'd heard of police officers knocking on your door early in the morning with bad news. I knew something was wrong. Fortunately for me, as I opened the door, I awoke — this was only a dream.

After spending the next hour trying to fall back to sleep, I heard the front door open. I walked my husband with a strange look on his face. My instincts kicked in; I knew something had happened. I followed him into the kitchen; he didn't have to say anything. Something terrible had happened. He said he wrecked his truck. Between the moments of anger and disbelief, I was able to gather myself and asked, "Are you all right? Are you hurt? Did anyone else get hurt?"

"I'm fine, and no one was hurt," he replied. No one had been around, thank God. I asked how it happened. At first, he said he skidded out of control on some water on the road. It wasn't until later, through the friends he had been drinking with that night, that the truth came out. He had fallen asleep just as he entered our subdivision. His truck ran up on the embankment and took out five trees.

I immediately went out to see his truck parked in the driveway. The windshield had been shattered, the hood and roof of the cab had been dented, and there were several scratches all over. You might think this wasn't a lot of damage; however, knowing what was located on the other side of the tree line might give you a different perspective. Had the vehicle veered a little more to the right, he would have gone over the retention barrier and landed in some family's swimming pool. Fortunately for him, the vehicle stopped just short of entering their yard.

My husband did something really stupid that night. He decided to drive himself home after consuming a lot of alcohol. He never once gave thought to the people he would have hurt — possibly killed — or even considered what he was doing to his family. We have two daughters, a new house and plans for our future. On that night, my husband was selfish. He allowed himself to get caught up in his drinking and failed to recognize when he had too much to drink. To this day, I have no idea why my husband thought it was a good idea to drive home or why his friends let him drive home after a night of drinking.

My husband was very lucky that night. Left behind from his lapse in judgment are dents and scratches on the vehicle and the tire marks indicating where he departed the roadway. With time, the vehicle will be repaired, and the skid marks will disappear. The trees will be replanted and will once again prosper. The one thing that won't go away in time is the thought that I, along with my daughters, could have lost my husband, their father, because of the irresponsible decision to drive under the influence of alcohol while fatigued.

The decision to consume alcohol is an individual choice. It's a decision made freely by thousands of individuals every day who are, for the most part, pretty responsible. If you drink, don't drink and drive and get a designated driver. Remember: the decision you make to drive drunk doesn't just affect you; it affects your whole family. ☺

Ground

Snapshot on Safety



Send us your "accident waiting to happen" photos - selections to be published here in future issues of *Wingman* magazine.



Wingman = Vigilance & Responsibility!

Send your photos to afsc.semm@kirtland.af.mil.

This quarter's photos by Dennis Spotts from the Air Force Safety Center, Kirtland AFB, N.M.

Ground

LARRY JAMES

Ground Safety Division Contractor
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Quick Turnaround Leads to Disaster

After school was out, Airman 1 (A1) and Airman 2 (A2) decided that A1's little brother would spend a week with them at their home. They drove three hours to A1's mother's home to get the little brother. During the week, A1 and A2 worked their normal schedules and spent time taking A1's brother here and there for entertainment during off-duty hours. On several nights, A1 and little brother stayed up late playing games and catching up on their lives. After a week, A1 and A2 drove A1's brother back home. They left at the end of the workday and drove the three hours to A1's mother's house, arriving after 8 p.m. A1 and A2 spent about an hour at the house before deciding to get back on the road. Approximately two hours into the return trip, A1 fell asleep at the wheel. Their car left the road going 75 mph, traveled through the median and ended up entering the opposite lanes of traffic backward. The car was struck from behind by a Suburban that was going in the opposite direction. A2 was ejected from the vehicle and died at the scene. A1 succumbed to injuries shortly after arriving at the hospital. Alcohol was not a factor in this mishap. Fatigue was a factor in this mishap.

Lessons Learned

A1 and A2 didn't use good risk management when deciding to drive three hours home after a week where

their normal sleep patterns were interrupted. While working their normal schedules, A1 and A2 stayed up later and did more activities for the entire week when A1's little brother visited them. In hindsight, it would have been better to sleep at A1's mother's house and drive back fresh in the morning. A1 and A2 also made a poor risk management decision by choosing not to wear their safety belts, which directly led to the injuries that caused their deaths. You're many times safer in a collision when wearing safety belts. The speed limit at the mishap location was 75 mph, which means they were traveling 110 feet per second. Often, fatigued drivers will go into a state of micro-sleep (nodding off) where their eyes are closed and their mind is at rest for several seconds at a time. The speed, fatigue and lack of seat belts, combined with poor risk management, led to catastrophic results. Be aware of how your schedule changes when visiting with family or friends and monitor how you feel. Be conservative with travel time and default toward rest instead of pushing on. Most of us have driven when fatigued, and some have had close calls. The only differences between your outcome and the one in this story are timing and luck. Always wear your seat belt! Your family wants to visit you, not your grave.

Softball, Hard Curb

Airman 1 (A1) and Airman 2 (A2) played in a softball game at an off-base softball complex and, after the game, traveled with the rest of the team to A1's home. The team was scheduled to play in an all-night softball tournament the following night, so they decided to stay awake as long as possible to ready themselves for the tournament. They spent the rest of the night in

the house and garage playing cards and socializing, which involved the consumption of alcohol. At around 2:30 a.m., A2 noticed that A1 had a motorcycle in the back of the garage and expressed some interest to A1. A1 moved the motorcycle to the driveway to give A2 a better look at it. A1 then started the bike so A2 could hear how it sounded. A1 then offered A2 a quick ride around the block to show how it performed. Despite the warnings of other team members, A1 and A2 took off. About one-quarter of the way around the block, while traveling through a curve at 45 mph, A1 lost control, laid the bike down and skidded into a curb. A1 and A2 struck the curb and received several serious injuries, including broken bones, skull fractures and, in A1's case, the loss of one eye. Alcohol was a factor in this mishap.

Lessons Learned

A1 and A2 made several poor risk management decisions that led to this mishap. Even after several teammates tried to convince them not to ride the motorcycle in their condition, A1 and A2 could not be swayed. It's very unlikely that you'll make sound judgments when you have 2.5 times the legal limit of alcohol in your system. Another poor decision was to choose not to wear a helmet. Sliding into the curb at over 45 mph was going to cause some injuries, but a helmet could have lessened the impact to the head. Riding a motorcycle with a passenger is very different from riding alone. The center of gravity and the weight change causes severe limitations to maneuverability. An experienced rider without a passenger could manage the curve at 45 mph. The added weight of the passenger made the maneuver impossible, especially under the influence of alcohol. Once again, it must be stated that it's never a good idea to drink and drive, and it's never a good idea to ride a motorcycle without a helmet. A1 and A2 survived, but their lives will never be the same. If you choose to drink with your friends, put away the keys and be the same tomorrow as you are today.

Fishing for Life Jackets

Airman 1 (A1) went home on leave and stayed at an aunt's house. A couple of days after arriving, A1 decided to go camping and fishing with Brother 1 (B1) and Brother 2 (B2). After picking up a 14-foot flat-bottom boat from their father, the brothers traveled about 200 miles to the lake and campsite. Upon arrival, they set up camp, went to the store for supplies and got some rest. Early the next morning, they awoke, had some breakfast and put the boat in the lake. The weather had changed overnight. It had gotten colder, and the wind was blowing between 25 and

30 knots. The conditions weren't ideal, but the brothers decided to go fishing anyway. A1, B1 and B2 took the boat out about 3,000 feet and set the anchor. The boat began to drift because of the strong winds and had soon moved another 600 feet toward the middle of the lake. By this time, the waves were 2- to 3-feet high, and some were breaking into the boat. A1 started the engine and tried to maneuver the boat back to its original position. Sometime during the repositioning, a large wave struck the boat and washed one of the two life jackets overboard. B2 immediately jumped in the lake to retrieve the life jacket. The boat continued to take on water from the waves and was soon swamped. Without the benefit of life jackets, A1 and B1 jumped out of the boat shortly before it capsized. A1 tried to push the boat toward B2, but was unable to do so. A1 and B1 started to swim and try to help B2 get back to the boat, because even capsized, the boat would float. A1 then decided to go back to the boat and get the other life jacket. When B1 reached B2, they could no longer see A1. Another boater came by and rescued B1 and B2 from the water and called for help to find A1. Because of the conditions, search and rescue were unable to conduct a search for several hours. Divers recovered A1's body in 20 feet of water. Alcohol and fatigue were not factors in this mishap.

Lessons Learned

A1, B1 and B2 made poor risk management decisions that led to a tragic outcome. The boat was a 14-foot flat-bottom boat designed for smooth water operations. The choice to take the boat out toward the middle of the lake in high winds and 2- to 3-foot waves put the brothers in harm's way. Even though there were three brothers in the boat, there were only two life jackets. Most states require a life jacket per person on board. B2's choice to jump in after the overboard life jacket instead of retrieving it with the boat started an escalation of events and separated the brothers. This led to indecision on A1's part and lots of swimming in choppy waters without the aid of life jackets. No one had received any formal boat safety training and were, therefore, unfamiliar with the capabilities and limitations of the boat. Don't make choices that could cost your life. If boating is in your future, take a state-certified boating safety course. Know the limitations of yourself and your equipment and be sure to have and wear a life jacket. The life you save could be your own. ☞



Safety is a TEAM Effort!



VINCENT DOTSON
Ground Safety Division
Air Force Safety Center
Kirtland AFB, N.M.

Ground

The Air Force recently emphasized the Voluntary Protection Program as a key leadership and safe-worker initiative in most Air Force units. Two key pillars of this focus are leadership and accountability. Both will clearly improve workers' safety environment while simultaneously assisting your leaders in keeping aware of hazards in workplaces. The center for VPP is you!

VPP, although safety-driven, is not a safety program, but a process. In order for VPP to work, it needs to be a cross-functional team effort where workers keep a focus on safety and assist units in reducing mishaps and worker compensation costs.

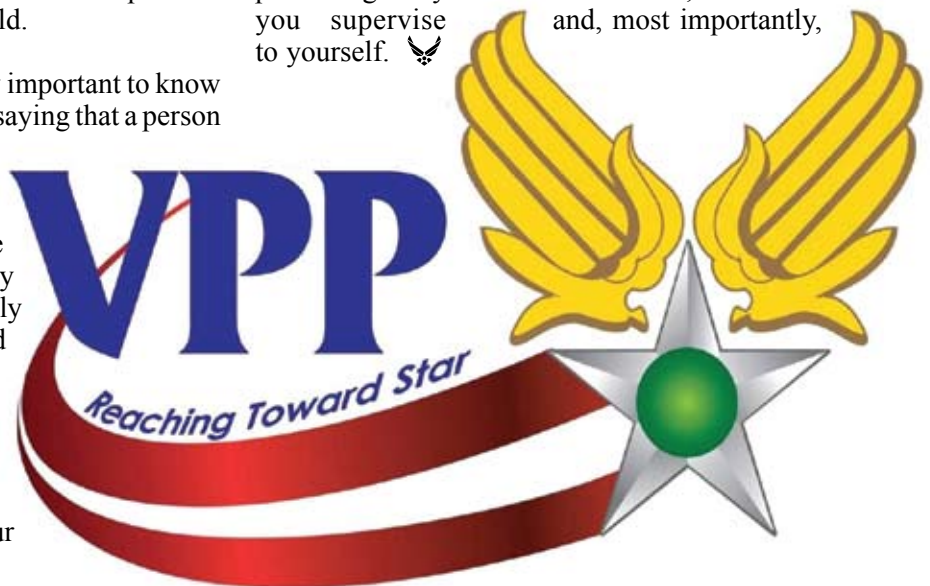
"Safety ethos," or character, should always be a pillar of any safety plan for operations. Our Air Force has a solid wingman culture that produces a professional force where we all gain by knowledge and skills learned through on-the-job training, technical/flight orders, supervision/leadership and role-model examples. Through these opportunities, we're able to see, learn and emulate the professional skills in training and put them into practice where it matters most — the battlefield.

When practicing safety ethos, it's very important to know yourself. There's a famous Confucius saying that a person "who knows themselves first and then knows their enemy will have a thousand victories in a thousand battles; otherwise, they will always be defeated." Safety ethos is another way for us to see our true reflection, usually through other people. We can see and know ourselves through the daily on- and off-duty impressions we leave with other people. If we reflect our daily safety ethos by doing things right the first time, we ensure others not only see our right actions, but our true Air Force character and value.

Today, there are many who proclaim to be safety conscious, but have

the poorest of attitudes when it comes to safety. As commanders, supervisors and professionals, when someone disregards safety, it diminishes what we all work to represent. We must watch each other and not get drawn into the easy temptation of seeing the glass half-empty vs. half-full. We sometimes do this by saying things, such as "That safety initiative will never work," "That's not required" or "I don't have enough manning." Everyone is responsible for safety, and we all need to maintain the wisdom in recognizing the best way to promote our mishap prevention programs.

Take a moment to reflect on where you're projecting your safety ethos. Promoting safety as our No. 1 ethic is a duty we owe to our country, our Air Force family/co-workers and to ourselves. By participating in leadership, accountability and safety ethos focus areas, we can reinforce our existing commitment to each other on a personal level. Have you supported any safety initiatives lately? If you're unsure, it may be time to look in the safety mirror and check the reflection you're presenting to your co-workers, to those you supervise and, most importantly, to yourself. 🏆



Voluntary Protection Program

Have You Checked In?



VINCENT DOTSON
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General George Patton expressed a strategy for military success. Simply stated, “Don’t die for your country; make your enemies die for their country — our duty is to survive.”

The U.S. Air Force works hard to ensure survivability. Pilots, one of our most vulnerable groups, receive extensive survival training in the event of a downing, as well as in-depth egress training to ensure safe ejection in an emergency. A major portion of research and development of any new aircraft is the survivability of the plane and its egress capabilities. Airfield and aircraft security in a theater of war receive top priority. Longer ago than I care to admit, Air Police were renamed Security Police and challenged with this new tasking to provide just such survivability.


The Air Force also works hard to ensure your survival while away from hostile areas. We even have an official program aimed at your off-duty survival — it’s called “The Critical Days of Summer.” By taking more responsibility for ourselves and bringing the same on-duty principles of adherence to instructions into private motor vehicle operations, we could possibly prevent drunken driving, non-seat belt use and countless other mishap tragedies.

I encourage you to act as a wingman to at least one other Airman by offering your time and personal advice. Be someone they can approach and talk to. Demonstrate a little understanding by showing that you care. In this war on terrorism, “It’s on you” to care for yourself and be a good wingman, and “It’s on you” to keep personal

risk management sharp and focused in the right direction. This focus and kinship will bind and promote a genuine concern for our Airmen — military, civilian and their families — through mutual, self-directed relationships with each other. Relationships could involve talking, playing sports or just hanging out.

Our Air Force focus is to ensure folks make a personal commitment to look after each other. You don’t have to go far for that. Your check-in for safety could be assisting your co-worker, a friend, your neighbor, a gym partner or even a person from a different section or unit. The chance to take time, step back, listen, value these interpersonal relationships and identify members of the overall larger team, by name, will make a difference today and every day.

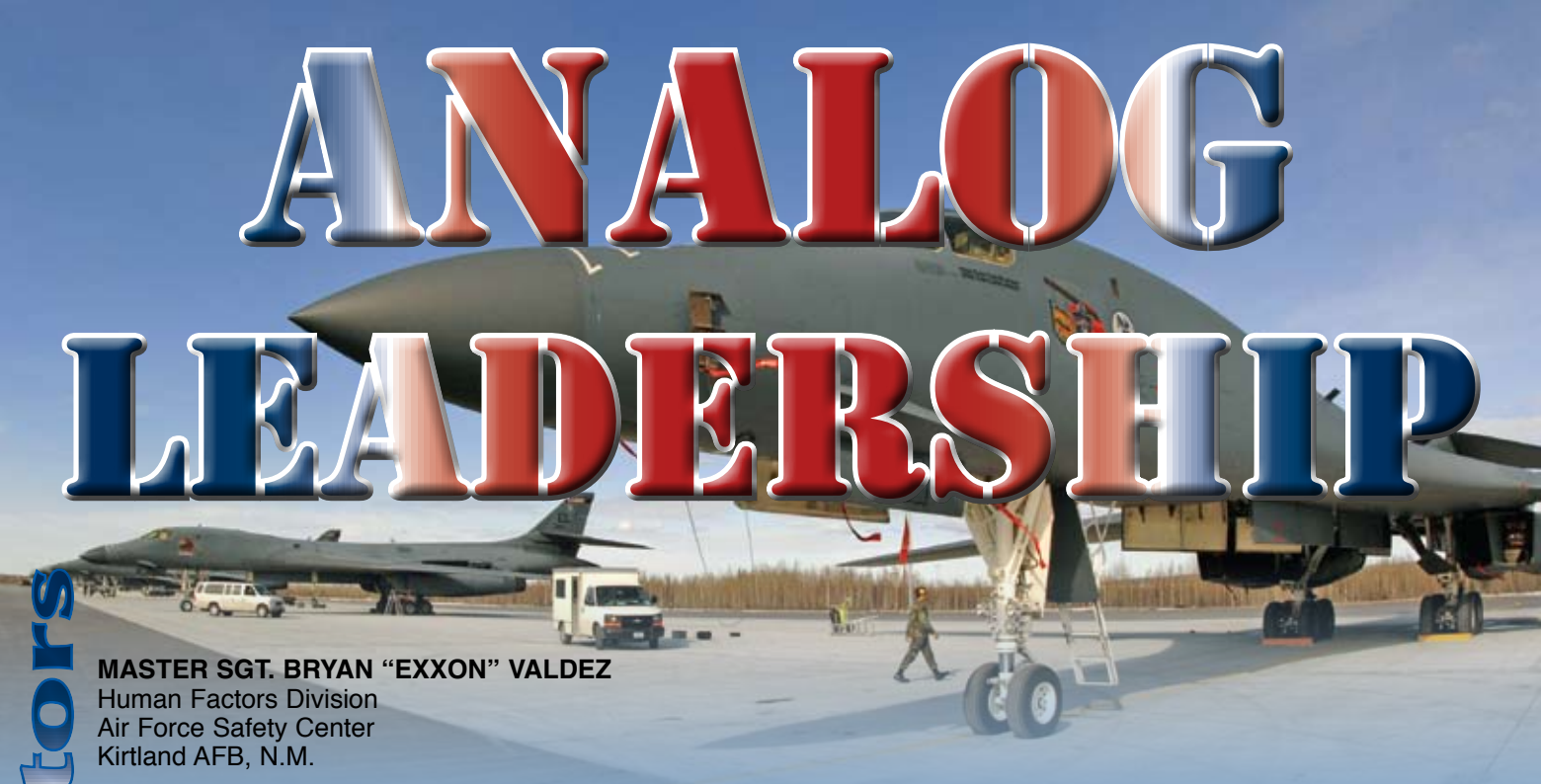
While it’s early in the Critical Days of Summer, I encourage your units to continue the spring safety campaign initiatives, with particular focus on PMV-4 and PMV-2 operations. Having unit and individual activities or just sharing new ideas will ensure you have a successful summer this year.

To once again paraphrase General Patton — our duty is to survive for our country by making the enemy die for theirs. That’s the duty you owe — to your country, to your family and, most importantly, to yourself. Whether over the skies of Afghanistan, on the ground at airfields in Iraq or at home station, we need to remain vigilant and keep each other safe. By participating in the preparation of summer activities, we reinforce our existing commitment to each other on a personal level. 



Ground

ANALOG LEADERSHIP



MASTER SGT. BRYAN “EXXON” VALDEZ
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It was Aug. 23, 1991. I stepped off a bus around midnight to meet a seemingly upset Staff Sgt. Walker at Lackland Air Force Base, Texas. To this day, I’m not sure what I did to upset him. We had just met, and he was calling me and my mother some names that I can’t repeat in this magazine. His leadership style, as abrasive as it may have seemed, was my first experience with analog leadership.

It’s been almost 19 years since that first night, and I’ve seen many things change. Sometimes things aren’t meant to change, though. You see, on my first night, that military training instructor knew my name (I thought it was Bryan, but apparently it was Dough Boy), and he didn’t forget it for six weeks. I’ll never forget graduation day when he made it a point to meet my family and tell them he was proud of me. I remember that day like it was yesterday, and I’ll never forget Staff Sgt. Walker.

Most of us have had supervisors in our careers who we’ve looked up to. Throughout my career, I’ve had great supervisors and remember all of their names. I remember their names because they knew mine. My supervisors also knew my wife’s and daughter’s name. They knew where I lived, who my friends were and where I went on the weekends. My supervisors knew who they wanted me to be, and they took the time to train and mold me into the master sergeant I am today. Everything I’ve accomplished in my career can be traced back to that first night.

Now, several years later, we’ve significantly drawn down our force, and it seems that we’re unofficially transitioning from analog to digital leadership. It appears, through the use of technology, that we’re leading our Airmen more and more through e-mail, text messages, Web sites, digital videos and computer-based training. Our personal information is stored in a database, and we’re reminded by e-mail to update it

every year during our birth month. While this technology does have its place in today’s Air Force, it doesn’t replace boots-on-the-ground analog leadership.

My analog enlisted leaders were always there for me, and they were awesome. They taught me how to walk, talk and work on jets; their discipline was swift and effective. Although I never received paperwork, my leaders weren’t afraid of hurting my feelings with old school tactics. When I messed up, I distinctly remember receiving an immediate one-sided counseling session and standing up at the next commander’s call to tell my peers what I did wrong and what I did to fix it. The system didn’t set me up to fail — I was proficient at doing that on my own. I was allowed to fail and learn from my mistakes. Leaders pushed me to my limits and picked me up when I fell.

For the past few years, I’ve had the unique opportunity to personally interview thousands of airmen through the Organizational Safety Assessment program and Air Force Culture Assessment Survey Tool (AFCAST). I can’t tell you how many times I’ve heard, “I don’t know who my supervisor is,” or “I haven’t seen my supervisor in months.” These safety programs have been instrumental, showing that Airmen from all ranks desire the face-to-face interaction of leadership. Leaders, it’s imperative you teach your Airmen the correct way to do their jobs and allow them the opportunity to fail. Yes, fail, because you’ll be there to show them how to correct themselves. More importantly, they need you present when they succeed. This is mentorship that a computer can’t offer.

Digital leaders, it’s time to reconfigure back to analog leadership. Do you want to increase your mission capable and quality assurance pass rates? Are you tired of staying late because Airman Snuffy lost another tool — which he isn’t sure if it was there when he checked out the toolbox?

Do you want to drastically reduce the buffoonery that could eventually lead to a safety mishap?

Then try a few of these proven methods:

1. Get out of the office and get out with your troops.
2. Let Airmen have some well-deserved time off — even if it means you taking their place. Your Airmen will appreciate it, and it'll give you a chance to lead from the front with real-time human interaction.
3. NEVER ask your Airmen to do something you're not willing to do yourself.

Now I know what some of you are thinking. *How am I supposed to find time to do that with all of the EPRs and taskers I have to do and all the e-mails I have to go through?* Simple. Good leaders make the time.

I vividly remember my personal reconfiguration to analog leadership with Chief Master Sgt. Wiggins walking my flight line without saying a harsh word to anyone until I came screaming around the corner in my expediter truck. Then he let me have it. He chewed me out for everything he could think of — dirty jets, fire bottles lying down, toolboxes out of place, unlaced chocks — you name it; he ripped me for it. I hated seeing him out of his office. In the morning meetings, he would chew me out in front of everyone for aircraft-delayed discrepancies. What did he want me to do? I didn't have time to worry about the little stuff; it was all I could do to have enough jets ready for the first go.

One day I'd had enough and made every crew chief line up every jet, fire bottle and toolbox on four rows. My crew chiefs fixed every little thing they could and hated me for it. This went on for weeks, and the chief never said a word about it until I asked him if he had seen the

flight line or our delayed discrepancies lately. He said that he did, and he was proud that I was doing my job. *Doing my job?* I was so mad at him until it hit me. Chief Wiggins had reconfigured my leadership style by getting me out of my expediter truck and walking the flight line. It seemed I found the time!

Amazingly, our MC and QA pass rates went up as our break and repeat/recur rates went down. I realized by focusing on the little things, the big things took care of themselves. My crew chiefs had regained their pride and, in the meantime, had become better maintainers by being held accountable for their actions. More importantly, my unit's safety stats dropped off of everyone's radar. My folks were instinctively practicing risk management by doing the right things on- and off-duty and were taking care of each other while taking care of the aircraft. My unit had become the new standard of excellence, and there wasn't a pilot around who wasn't proud to fly one of our aircraft. A simple leadership adjustment taught me that a unit's success hinges on everyone's equal involvement. For me, I knew every single one of my crew chiefs as if they were family. I knew their spouses and kids. I knew who their friends were and where they went on the weekends. I knew about the boyfriend and girlfriend troubles. I had become an analog leader.

Who were your analog leaders? Are you an analog leader? Technology is a wonderful thing, but it should never replace the human element of leadership. As our weapons platforms become more technologically advanced and we evolve into the future of cyberspace, we must remain analog leaders, because we're still responsible for the development and advancement of the Air Force's most precious asset — America's sons and daughters — our Airmen. ✈️

My name is Master Sergeant Bryan Valdez, and I am an analog leader!



U.S. Air Force photo by Dennis Spotts



UNDER RESPONSIBILITY

AIRMAN 1ST CLASS MONIQUE ORELLA
732nd Expeditionary Security Forces Squadron
Camp Taji, Iraq


I'm a 21-year-old Airman from Georgia and have been in the security forces career field for almost two years. I'm currently deployed to Camp Taji, Iraq, on a yearlong tour performing the police transition team mission in Baghdad. I'm part of an SF detachment that's training the Iraqi police to fight insurgency and to provide law enforcement and police services to the people of Iraq.

My responsibility is to provide rear security to my convoy as we patrol the streets of the Rasheed and Taji districts of Baghdad. As the squad's main rear M-240B machine gunner, I control traffic, ensuring vehicles maintain a safe distance from the convoy. I also identify any threats, which include vehicle-borne improvised explosive devices, snipers, heat grenades and suicide bombers. I've performed 21 combat missions covering 96 square miles containing 2.4 million residents.

While patrolling on Sept. 15, 2009, as the rear security vehicle gunner, my convoy was struck by an explosively formed projectile, known as an EFP. I maintained 360-degree security while up-channeling the composition of approaching traffic and used hand and arm signals to halt upcoming vehicles approaching our cordon.

The actions of my team facilitated the casualty evacuation of two critically wounded Airmen in less than 10 minutes. Half of my team stayed behind to secure the site for blast analysis investigation by explosive ordnance disposal personnel. The security we provided ensured the blast area was not tampered with while allowing EOD staff to determine the construction material used to build the device and to identify the insurgent group responsible.

During this incident, I saw two of my SF brothers wounded in action. I was upset and a little scared. I was angry at the insurgents who hit our convoy. I heard my friends screaming in the Humvee and wanted to get out and help them, but I knew I had a responsibility to provide security. I relied on my 62 days of training at Fort Bliss, Texas, and the many hours of battle drills that prepared me and my squad for this type of situation. We remembered we were a team, and each member of the squad performed their responsibility in sync with each other to save the lives of all our team members.

Because of our actions, the security in Iraq has greatly improved from a couple of years ago. The police transition team has been a rewarding experience and has reminded me why I'm proud to serve my country in the U.S. Air Force. 

Weapons

ATTACK COURAGE TRUMPS FEAR

Weapons



ESPs Have Gone Hybrid

MASTER SGT. SID GUIDRY

Weapons Safety Division
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The hybrid fad has hit explosives site plans (ESPs). Unlike hybrid vehicles, hybrid ESPs aren't the preferred way of the future. A hybrid ESP, better known as a hybrid safety submission (HSS), contains exceptions to the explosives safety quantity distance (QD) criteria outlined in Air Force Manual 91-201, *Explosives Safety Standards*. Exceptions are further broken down into exemptions, waivers and deviations. Deviations don't warrant submittal of an HSS as they account for departures from non-QD requirements.

An HSS is an ESP that doesn't meet all QD criteria. An HSS includes paired relationships where there may be insufficient distance between two or more facilities. As a result, there are increased risks to resources above what has been determined to be acceptable. This results in an exception to QD criteria (exemption or waiver). The appropriate authority must accept increased risks associated with exceptions. Exceptions are evaluated to quantify the risk to resources. Quantification determines the appropriate approval authority, which may be as low as the wing commander or as high as the secretary of the Air Force. After approval of the exceptions has been granted, ESps then get forwarded as HSSs to the Department of Defense Explosives Safety Board (DDESB) for final approval.

Simple enough, right? Not so quick. There is a lot of effort that goes into the exception process. The following scenario will take you through the processes that are involved with exceptions and subsequent submittal of an HSS.

Let's say an ESP is being accomplished for Facility 461. There are three facilities that don't meet the required quantity distance criteria: Facilities 462, 463 and 465. Facility 461 is a bomb build-up pad. Operations at Facility 461 are mission essential and require 30,000 pounds net explosives weight for quantity distance of hazard division 1.1 ammunition

and explosives (AE). Facilities 462, 463 and 465 are considered related to Facility 461. The required distance from Facility 461 to these facilities is 560 feet. In all cases, the required distance isn't met. Evaluation of these facilities determined that operations conducted at Facility 462 aren't mission essential, therefore resources may be removed from 462 when AE operations are conducted at 461. This is known as a compensatory measure. When compensatory measures that negate the exception to QD criteria can be implemented, an exception isn't required. With this in mind, the 461/462-paired relationship doesn't require an exception, thus doesn't generate an HSS.

Operations conducted at Facilities 463 and 465 are mission essential, and there are no measures that can be implemented that'll mitigate the risks to resources at either facility. The actual distance to Facilities 463 and 465 are 500 feet and 479 feet, respectively. To quantify the risks to resources at these facilities, three factors must be determined: likelihood, exposure and possible consequences. These factors are then plotted on the exception decision nomograph at the right that will determine the appropriate approval authority.

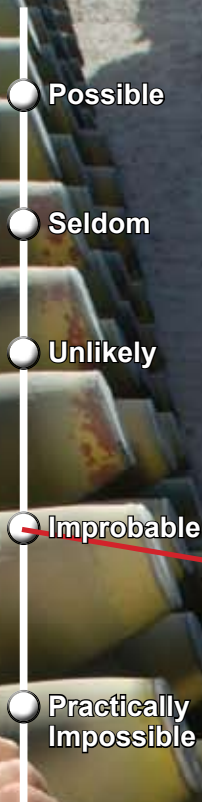
Likelihood relates to the possibility of a mishap occurring at the facility creating the hazard. With this in mind, the operations at Facility 461 must be evaluated and compared to criteria in AFMAN 91-201. The likelihood has been determined to be improbable.

Exposure relates to the amount of time resources are exposed to the hazard. Facilities 461, 463 and 465 are manned 24 hours a day, 7 days a week; therefore, the exposure would be continuous.

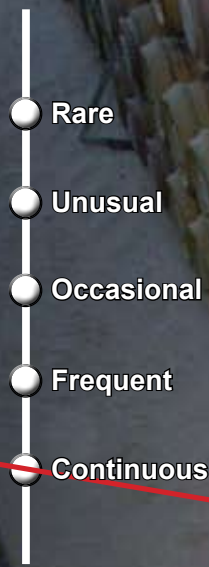
Possible consequences relates to the expected risk to resources at the facility that is being hazarded. In this case, we must evaluate the consequences at Facilities

Exception Decision Nomograph

Likelihood



Exposure

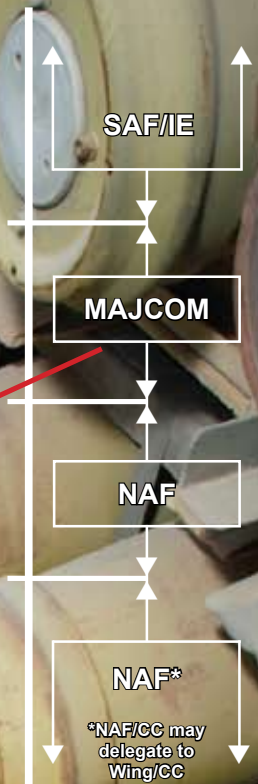


Pivot Line

Possible Consequences



Approval Level



Weapons

463 and 465. Utilizing criteria in AFMAN 91-201, Table 1.3, it was determined that the consequences are marginal.

These factors are then plotted on the exception decision nomograph shown, resulting in the major command as the approval authority.

There are no plans to mitigate or eliminate the exception associated with the 461/463-paired relationship within the next five years, therefore an exemption is submitted.

Operations conducted at Facility 465 are expected to combine with operations at 461 within the next five years. Afterward, there will be no exception. A waiver is submitted for the 461/465-paired relationship.

Based on the preceding information, the ESP for Facility 461 would be submitted as an HSS to the DDESB for final approval. Before submittal, the MAJCOM commander or vice commander must approve the exemption for the 461/463-paired relationship and the waiver for the 461/465-paired relationship. The DDESB will provide final approval after review of those paired relationships that meet QD criteria. ☛



What

Nuclear Surety

Means to John Q. Public

Weapons

MAJ. DRAKE DAGGETT
Weapons Safety Division
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There's no common definition of nuclear surety in the Department of Defense and Department of Energy complex. Nearly all Americans will probably look glassy-eyed when you try to give them your definition. I'm going to build a definition that you, Airman Newclear Sherty, can even give to your grandmother.

The U.S. Air Force has implemented DOD Directive 3150.2, *DOD Nuclear Weapon System Safety Program*, through Air Force Policy Directive 91-1, *Nuclear Weapons and Systems Surety*. This directive defines nuclear surety as "... all functions and activities accomplished to ensure Air Force

nuclear systems are designed, developed, operated, maintained, transported and controlled to provide maximum safety to the public and operating personnel while protecting the environment and maintaining reliability to support mission accomplishment."

They will ALWAYS go off when we want them to ...

The Air Force has implemented AFPD 91-1 with Air Force Instruction 91-101, *Air Force Nuclear Weapons Surety Program*. It defines nuclear weapons surety as "... materiel, personnel and procedures that contribute to the security, safety and reliability of nuclear weapons and to the assurance that there will be no

Safety

Securi



nuclear weapons accidents, incidents, unauthorized weapons detonations or degradation in performance at the target.”

and interdependent on each other. Nuclear surety is deficient when one or more of these functions aren't up to standard.

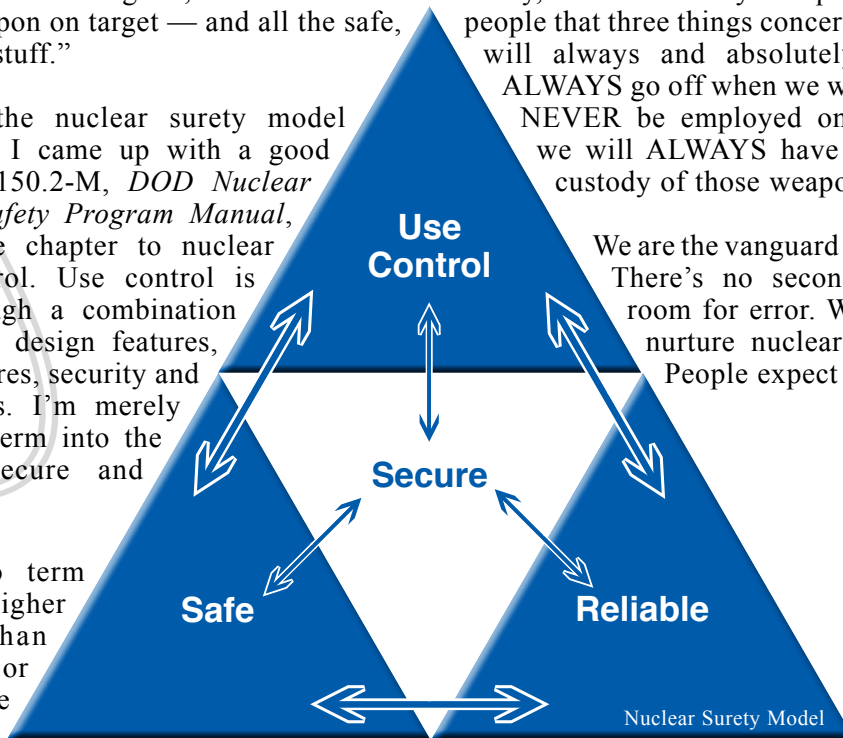


...they will NEVER be employed on American soil ...

Nuclear surety is an abstract concept that ties together very discrete terms and means different things to different people. Ask any weapons safety manager what nuclear surety is, and you may get an answer similar to this: “Nuke surety is safe, secure and reliable.” Ask a missile launch officer what nuclear surety means to him or her, and you may get a response like “... coded transmissions that are received and decoded directing me, the human in the loop, to put the weapon on target — and all the safe, secure and reliable stuff.”

I came up with the nuclear surety model shown here before I came up with a good definition. DOD 3150.2-M, *DOD Nuclear Weapons System Safety Program Manual*, dedicates an entire chapter to nuclear weapons use control. Use control is accomplished through a combination of weapons system design features, operational procedures, security and system safety rules. I'm merely incorporating that term into the standard “safe, secure and reliable” definition.

In the model, no term or function has higher precedence than any other term or function. They are all interrelated



With the model in place, I can now easily define nuclear surety: Nuclear Surety is a concept that comprises safety, security, reliability and use of control functions to ensure that weapons function when authorized and never anywhere else.

... and we will ALWAYS have positive control and custody of those weapons.

If I had to explain this concept to my grandmother, I'd say, “Nuclear surety is a pact with the American people that three things concerning nuclear weapons will always and absolutely occur: They will ALWAYS go off when we want them to, they will NEVER be employed on American soil, and we will ALWAYS have positive control and custody of those weapons.”

We are the vanguard of nuclear deterrence. There's no second place. There's no room for error. We must maintain and nurture nuclear surety at all times. People expect no less. ☸

Weapons

ty Reliability



Senior Leader Perspectives on Cyberspace



“As we move to protect our interests in space and cyberspace, we must begin by evaluating our vulnerabilities. Threats to our space and cyber capabilities pose some of the most significant challenges to our national security. Those who pose these threats, therefore, must be deterred or, if necessary, compelled to stop. Unfortunately, Cold War methods of deterrence, which were founded on the ability to identify our adversaries

and influence them with roughly similar capabilities, do not always apply today.

“Instead, we today find ourselves in a more precarious situation — one where, at times, we are much more dependent on these domains than our adversaries, and one in which it may be very difficult to attribute threats, either to those who are deliberately taking action against us, or perhaps to natural causes from the extremely harsh environment in which our space systems operate.

“Attributing threats in cyberspace is just as daunting,

due to technological limitations in detecting and finding cyber intruders. It is also worth noting that what constitutes a challenge to our freedom of action in space and cyberspace can range from simple tactical disruption with short-term military implications, to broader interference that affects the ways in which our nation — not just our military — depends on these two domains. For example, attacks on commercial communications satellites can affect an entire universe of civilian uses, as well as the very significant proportion of military satellite communications that rely on commercial satellite systems.

“Or, consider that a disruption to the Global Positioning System could affect not only precision navigation and timing for our joint forces, but also our civilian banking and finance, commerce and transportation sectors; or, that a hacker could access anything from medical records to financial statements, business proprietary to government sensitive, with malicious intent to disrupt efficient management of a vast multitude of networked global activity — both civilian and military. In short, the implications of attacks on our space and cyber capabilities are potentially more consequential than what would occur from a purely military perspective.”

Air Force Chief of Staff Gen. Norton Schwartz, Remarks to the Air Force Association's Air Warfare Symposium and Technology Exposition, Orlando, Fla., Feb. 18, 2010

“So, our operations will be challenged in air, space and cyberspace. And, I would even say this differently. It's no longer about future tense. It's about present tense, and it's about past tense. Our operations have been challenged in space. They

certainly have been challenged in cyberspace, and they are being challenged in both those places today.

“So what do we do about it? Well, let's take the air model for a second. We didn't pack up and go home the first time anti-aircraft weapons appeared. We didn't pack up and go home the first time another aircraft rose in the sky to challenge us. What we said was, 'This is a contested domain, and we have got to be prepared to fight and win in this contested domain.'”

“How we deal with threats that we encounter will be different in space and cyberspace. See, I happen to think that you can establish air superiority. You pick a joint operating area over which to establish air superiority and you go achieve it. I'm not so sure that the same words mean the same thing in space and cyberspace. And so, maybe we need to think differently about the whole notion of defense. And certainly, if you just think about cyberspace for a second, I hear people talk about defending the network, and many of you in this room have taught me a very important lesson. And that is, you can't defend cyberspace. What you can do is assure your mission, and that's where we have to focus.”

Gen. C. Robert Kehler, Commander, Air Force Space Command, Remarks to the Armed Forces Communications and Electronics Association Cyberspace Symposium, Colorado Springs, Colo., Jan. 12, 2010

“A year ago this month, we had our wake-up call in cyberspace. It didn't get a lot of press, but we all know some of the consequences of it — we saw the messages, no more thumb drives, etc. We had serious intrusion into our DOD networks a year ago. I think it's why I didn't come to this conference a year ago, as a matter of fact. We were working that problem pretty hard at STRATCOM. It was our wake-up call.

“We all grew up with the Internet. It just kind of started to appear on our desks, kind of ubiquitous. We were raised with it as a convenience. It's a convenience for my children. It's a convenience for me. It's not a convenience for us in the military. It's a necessity. We cannot conduct warfighting operations without it. It's not the business of the J6. It's not the business of the adjutant clerk in your office who's the IA specialist. It's commanders' business. It's commanders' business to pay attention to making sure that that network is configured properly, the men and women who

use that network are trained properly to conduct operations on that network, and that network is postured to support their warfighting needs. That's the culture change that has to change. That's probably the toughest of the three, adjusting that mindset, making this commanders' business.

“In the conduct area, we need to do a better job training our people. Every one of us is like a gate guard on the base. Through our inappropriate action or inaction, we each have the potential to allow an adversary into our networks. So everybody needs to be trained. A once-a-year pop-up screen on your computer to get you your annual cyber training is not adequate when an adversary is out there today changing their TTPs hourly.

“Lastly, we need to hold our people accountable. If you had somebody that walked out of the office with a briefcase with some classified in it, and they went to the commissary and they left it on the counter, accidentally, and went home, do you think they might be called in front of the commander the next day? I think so. Yet, people do wrong things, things they shouldn't be doing on networks, that allow adversaries into our networks to steal sensitive data, important data. And are we holding them accountable? Are commanders even aware of it? If they are, are they holding them accountable? “

Gen. Kevin P. Chilton, Commander, USSTRATCOM, Remarks to the 2009 Air Force Association Global Warfare Symposium, Los Angeles, Calif., Nov. 20, 2009 ✪



Planning for Cyber Surety

LT. COL. ROBERT MCBRIDE

Space Safety Division
Air Force Safety Center
Kirtland AFB, N.M.

On Jan. 22, 2010, the commander of Air Force Space Command certified the 24th Air Force for initial operational capability. This event marked a milestone in the Air Force. Few took notice when, back in 2005, the Air Force changed its mission statement to include fighting in cyberspace. Most people accepted the idea that we were a net-centric force reliant on digital information systems and information technology networks. It made sense to take actions to protect our networks from hackers and thieves. Everyone took notice, however, when the Air Force declared cyberspace as one of its three warfighting domains (along with air and space) and announced its intention to stand up a numbered air force to conduct operations in that domain. People began to ask, "What is cyberspace?"

In a May 2008 memo to the military departments, then Deputy Defense Secretary Gordon England outlined the Department of Defense's "official" definition for cyberspace. He wrote that cyberspace is "... a global domain within the information environment." The information environment is a familiar term to cyber warriors; it's the environment in which information operations are conducted. Computer network

operations is one of five "core capabilities" of IO and is synonymous with cyber operations. In joint terms, CNO consists of three elements: attack, defense and exploitation. The Air Force IO community prefers to call it network warfare operations with the three elements NetA, NetD and network warfare support. Regardless of the diversity of definitions, it's important to recognize the new reality that's upon us — namely, that the Air Force is conducting combat operations in this new domain utilizing a relatively new tool in our arsenal: the cyber weapon.

With any new weapons system, it's important to develop rules for its safe operation. The degree to which a weapon is controlled is reflective of its destructive potential. For example, the constraints on the use of an M-16 rifle are far different than the constraints placed on the use of a nuclear weapon. In fact, the destructive potential of nuclear weapons is so great that we've developed an entire program for handling them. The Air Force Nuclear Surety Program directs detailed procedures to ensure the safety, security and reliability of nuclear weapons and weapons systems. The nuclear weapon has been placed in a special category of weapons: a weapon of mass destruction.



Joint Publication 1-02, *DOD Dictionary of Military and Associated Terms*, defines a WMD as a weapon "... capable

of a high order of destruction or causing mass casualties.” During the Cold War, this definition was sufficient. However, in an age of asymmetric attacks by nonstate actors, we find this nomenclature lacking. In May 2007, hackers laid siege to the tiny country of Estonia. In a coordinated effort, a series of cyber attacks crippled dozens of government and corporate sites. The media dubbed it “the first cyber war.” While no physical damage, the effects of this cyber attack were widespread. In this example, the cyber weapon could be accurately called a weapon of mass effect.

In a 2006 report to the Homeland Security Advisory Council, WME was defined as a weapon “capable of inflicting grave destructive, psychological, and/or economic damage.” The report recognized that WMEs could not only cause physical destruction, they could also damage the economy or cause people on a large scale to alter their behavior. Arguably, the potential for mass psychological effects is what makes the cyber weapon appealing to terrorists. In an article titled, “Cyber Terror – Potential for Mass Effect,” the authors outline four characteristics of a cyber weapon that makes it attractive to terrorists:

- **Asymmetry:** The ability of a lone individual or small group to cause disproportionately massive damage.
- **Accessibility:** The possibility of inflicting damage on vital infrastructure that is normally protected by physical means.
- **Anonymity:** The ability to remain hidden in the global information network.
- **Range:** The possibility of striking targets around the globe without the need for physical proximity to the target.

These characteristics make the cyber weapon especially dangerous and warrant the need for special attention to prevent inadvertent or unauthorized use. It requires, just like nuclear weapons, a surety program. As mentioned earlier, surety encompasses safety, security and reliability. Surety programs protect

critical data and establish measures to prevent accidents, mishaps, unauthorized or inadvertent use. These programs also establish rules for certification of weapons systems and rules for access and handling.

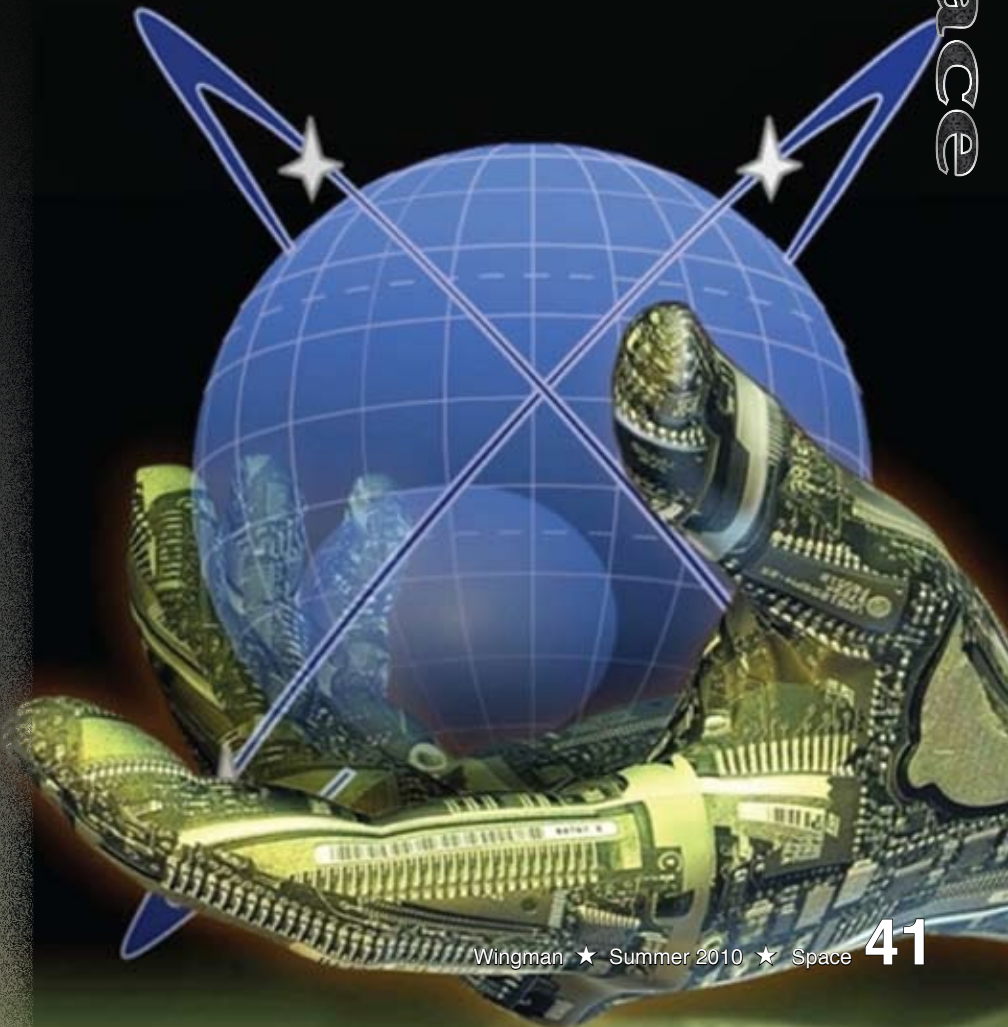
In coordination with AFSPC and 24th Air Force, the Air Force Safety Center is developing the policy direction for establishing a Cyber Surety Program. Cyber operations are rapidly evolving and require agility and flexibility. The policy under development will be broad and enabling while ensuring the safe and secure execution of cyber operations. This has turned out to be a challenging process given the diversity of definitions for describing this new domain of operations. ✨

References:

Deputy Defense Secretary Gordon England, “Memorandum for Secretaries of the Military Departments, Subject: The Definition of ‘Cyberspace,’” May 12, 2008.

Homeland Security Advisory Council Weapons of Mass Effect Task Force, “Report on Preventing the Entry of Weapons of Mass Effect Into the United States,” Jan. 10, 2006.

Lt. Col. Ed Sbrocco, Tom Ward, Chris Baden; “Cyber Terror – Potential for Mass Effect,” IA Newsletter; Information Assurance Technology Analysis Center; Winter 2001/2002.



Cyber Surety:

A Short Course

Space

LT. COL BARRY COLE

Space Safety Division
Air Force Safety Center
Kirtland AFB, N.M.

Did China attack Google? Google claims it happened. How did Google find out what happened, and who did it? How DID they get attacked? What is Google doing to defend itself from further attacks?

Cyberspace attacks have become a part of everyday life for a large portion of the world. Cyberspace has been described as a Wild West-style environment. The Air Force doesn't and can't work on cowboy-style rules of engagement. We have a greater responsibility, a calling to protect the safety of the nation and its citizens. So enters the idea of "cyber surety."

We often overlook the importance of definitions. Without clear and concise definitions, though, communication would grind to a halt. In the Department of Defense, we use acronyms all the time; yet, there are lots of acronyms that have different meanings or definitions. For our purposes, we want to focus on cyberspace. Let's start with some joint definitions and basis of communication for what we're talking about.

In Joint Publication 1-02, *DOD Dictionary of Military and Associated Terms*, the information environment is defined as "... the aggregate of individuals, organizations and systems that collect, process, disseminate or act on information." Can you think of anyone in the Air Force that falls outside this definition? Let's decrease the scope.

Cyberspace is a global domain within the information environment consisting of the interdependent network of information technology infrastructures; this includes the Internet, telecommunications networks, computer systems and embedded processors and controllers. Information technology infrastructure refers to the suite of tools used for managing and processing information and includes any communications device or computer, its ancillary equipment, software applications and related supporting resources. This sounds like everything. Does this mean using a computer makes you a cyber warrior? To answer that, we need to differentiate between the various inhabitants of cyberspace.

In cyberspace, there are three categories of inhabitants. Ninety percent of us are in the first category: users of IT systems. We surf the Web, send e-mail and use applications, such

as the Defense Travel System, SharePoint and the Advanced Distributed Learning System. While we're all vulnerable to attack, we're not "fighting" in cyberspace. Almost ten percent fall into the second category: maintainers. Maintainers ensure our networks are connected, applications are running and servers are functional. The remaining one percent make up the final category: operators. Operators are the "pointy end of the spear" and actually take the fight to the enemy in cyberspace.

The way we operate and fight in the cyberspace domain is called computer network operations and consists of computer network attack, computer network exploitation and computer network defense. Computer network attack consists of actions taken through the use of computer networks to disrupt, deny, degrade or destroy information resident in computers and computer networks, including the computers and networks themselves. Computer network defense consists of actions taken to protect, monitor, analyze, detect and respond to unauthorized activity within the DOD information systems and computer networks. Computer network exploitation enables operations and intelligence collection capabilities conducted through the use of computer networks to gather data from target or adversary automated information systems or networks.

Cyber weapons systems operate in the cyberspace domain and produce CNO effects within this domain. Cyber weapons systems are comprised of cyber weapons, the hardware needed to deploy the cyber weapons and cyber weapons systems operators who are trained and certified in the performance of CNO duties. The part of this system that actually produces the effect is the cyber weapon. A cyber weapon is the actual software or executable logic designed to produce effects in or through cyberspace.

Since cyber weapons have the potential to produce mass effects and their use can have severe consequences on a national and international scale, cyber weapons require special handling and protective measures to prevent accidents or unauthorized use.

The concept of safety, as it applies to cyber weapons, is the prevention of mishaps. We want to make sure that we do everything we can to prevent unintended or accidental effects through the use, storage, creation, transport/transmission or modification of a cyber weapon. A computer virus is an example of a cyber weapon. An unintended or accidental effect of a virus might be that it propagates and is transmitted back to the originator, producing an unwanted/

accidental effect. An example of safety might be that it's coded to detect which computer it's on, and if it's on the originator's, ensure it doesn't produce an effect and remains dormant. Another safety feature may be an "expiration date" for that virus.

A cyber weapon is only useful if the adversary doesn't know about it or can't counter it in time to eliminate the effects of its use. Any breach in security can render the cyber weapon useless. Considerations, such as physical protection of the hardware and software, plus proper training and care of the operator, add to the overall security of a system.

A cyber weapon has to be able to produce the desired effect with assurance to the user. If the cyber weapon has the potential to not produce the desired effects or to produce unintended, collateral or secondary and tertiary effects that are unwanted, the usefulness of the cyber weapon is diminished or eliminated altogether as the risks involved increase.

The more we look at safety, security and reliability on an individual basis and analyze the consequences of a lapse of any one of these, we begin to see they are interrelated. Cyber weapons surety encompasses the concepts of safety, security and reliability since a failure of any one of these areas has the potential to create national and international consequences and/or a serious threat to national objectives.

Some similarities with the nuclear world, which deal with weapons of mass destruction, are expected when dealing with cyber weapons.

The U.S. isn't the only country or entity that has cyber weapons and conducts computer network attacks. As a domain, cyberspace is continually contested, and there's a war being waged. At any time, you can pick up a paper and read about incidents like Google claiming China was attacking them to the cyber attacks against Estonia in 2007 and Georgia in 2008.



Take a lesson from how the U.S. tries to defend itself in cyberspace. We use a layered defense. Any one layer is not necessarily difficult to penetrate, but as the layers add up, it becomes harder and harder. Using encrypted connections and/or transmissions, encrypting personal information, not storing or transmitting personal information, using robust passwords, closing down browsers when not in use, using good anti-virus software, not accessing risky sites or opening emails from unknown recipients are all things that those of us in cyberspace can do to help defend against attacks. This applies to everyone! As a member of the Air Force, you should be aware and on guard for attacks and exploitations whether at work or at home. Because you're in the world's greatest Air Force, you ARE a target. ✨

"I've been explaining cyberspace as a densely crowded urban area. In cyberspace, right now, people are going shopping. People are going to the library. They're traveling. They're banking. They're visiting. They're communicating. They're doing everything you can do just about as if you were walking down the street. And just like walking down the street, in that densely crowded urban area with you in cyberspace, there are criminals, there are vandals, there are spies, and there are state actors. There are other people's militaries. And they're all in there at the same time doing their thing — a very interesting set of challenges in that kind of environment." - Gen. C. Robert Kehler, Commander, Air Force Space Command, Cyberspace 2010 Symposium, January 2010

Maj. Gen. Frederick Roggero, Air Force chief of safety, proudly announces the Secretary of the Air Force, Chief of Staff and Chief of Safety awards for 2009. The Air Force has many safety achievements to be proud of in 2009, including the safest year ever in aviation safety. The Air Force Nuclear Surety Program was strengthened through functional expert visits to field units, publication of the Nuclear Surety Bulletin and providing deficiency analysis through the Quarterly Dull Sword report. Explosives site safety planning improved significantly throughout the Air Force, resulting in over 950 sites approved in FY09. These awards exemplify the best of the Air Force safety teams and the hard work of the winners.



AIR FORCE SAFETY AWARD WINNERS FOR 2009



Chief of Safety Awards

Safety Career Professional of the Year Award

Mr. Joe A. Joseph, 98th Range Wing,
Nellis AFB, NV (ACC)

Air Force Nuclear Surety Outstanding Achievement Award

Senior Master Sgt. Julio Perez, 15th Munitions Squadron,
F.E. Warren AFB, WY (AFMC)

Air Force Explosive Safety Outstanding Achievement Award

Master Sgt. Leslie Haga Jr., 9th Air Force,
Shaw AFB, SC (ACC)

Air Force Chief of Safety Outstanding Achievement Award for Ground Safety

Category I – 72nd Air Base Wing, Tinker AFB, OK
(AFMC)

Category II – 48th Fighter Wing, RAF Lakenheath, UK
(USAFE)

Category III – 92nd Air Refueling Wing, Fairchild AFB,
WA (AMC)

Category IV – 732nd Air Mobility Squadron, Elmendorf
AFB, AK (AMC)

Category V – 721st Aerial Port Squadron, Ramstein AB,
Germany (AMC)

Air Force Chief of Safety Special Achievement Award

62nd Operations Group, McChord AFB, WA (AMC)

Air Force Chief of Safety Aircrew of Distinction Award

Crew of Air Force Rescue 109 and Crew of Air Force
Rescue 205, 48th Fighter Wing, RAF Lakenheath, UK
(USAFE)

Air Force Chief of Safety Medical Achievement Award

366th Aerospace Medicine Squadron Human Performance
Team, 366th Medical Group, Mountain Home AFB, ID
(ACC)

Chief of Safety Awards cont.

Air Force Space Safety Outstanding Achievement Award

Lt. Col. Jeffrey Claxton, 30th Space Wing, Vandenberg
AFB, CA (AFSPC)

Air Force Directed Energy Weapons Safety Outstanding Achievement Award

417th Flight Test Squadron, 412th Test Wing, Edwards
AFB, CA (AFMC)



FLIGHT SAFETY PLAQUES

ACC

9th Reconnaissance Wing, Beale AFB, CA
55th Wing, Offutt AFB, NE

55th Electronic Combat Group, Davis-Monthan AFB, AZ
20th Fighter Wing, Shaw AFB, SC

AETC

41st Flying Training Squadron, Columbus AFB, MS
45th Airlift Squadron, Keesler AFB, MS

50th Flying Training Squadron, Columbus AFB, MS
48th Flying Training Squadron, Columbus AFB, MS

49th Flying Training Squadron, Columbus AFB, MS
71st Flying Training Wing, Vance AFB, OK

97th Air Mobility Wing, Altus AFB, OK
306th Flying Training Group, USAFA, CO

AFMC

416th Flight Test Squadron, Edwards AFB, CA

AFRC

446th Airlift Wing, McChord AFB, WA
339th Flight Test Squadron, Robins AFB, GA
10th Flight Test Squadron, Tinker AFB, OK

FLIGHT SAFETY PLAQUES

cont.

AFSPC

45th Space Wing, Patrick AFB, FL

AMC

6th Air Mobility Wing, MacDill AFB, FL
19th Airlift Wing, Little Rock AFB, AR
60th Air Mobility Wing, Travis AFB, CA
305th Air Mobility Wing, McGuire AFB, NJ
311th Airlift Squadron, Peterson AFB, CO
92nd Air Refueling Wing, Fairchild AFB, WA

ANG

189th Airlift Wing, Little Rock AFB, AR

PACAF

35th Fighter Wing, Misawa AB, Japan
354th Fighter Wing, Eielson AFB, AK
33rd Rescue Squadron, Kadena AB, Japan

AFSOC

6th Special Operations Squadron, Hurlburt Field, FL
16th Special Operations Squadron, Hurlburt Field, FL
1st Special Operations Squadron, Kadena AB, Japan

USAFE

86th Airlift Wing, Ramstein AB, Germany
100th Air Refueling Wing, RAF Mildenhall, UK
493rd Fighter Squadron, RAF Lakenheath, UK



MISSILE SAFETY PLAQUES

CATEGORY I

ACC

33rd Fighter Wing, Eglin AFB, FL
83rd Fighter Weapons Squadron, Tyndall AFB, FL

AFMC

Air Armament Center Range Safety, Eglin AFB, FL

PACAF

18th Wing, Kadena AB, Japan
8th Fighter Wing, Kunsan AB, Korea

MISSILE SAFETY PLAQUES

cont.

USAFE

48th Fighter Wing, RAF Lakenheath, UK

CATEGORY II

AFMC

Air Armament Center Range Safety, Eglin AFB, FL

AFSPC

30th Space Wing, Vandenberg AFB, CA
90th Missile Wing, F.E. Warren AFB, WY



EXPLOSIVES SAFETY PLAQUES

CATEGORY I

ACC

4th Fighter Wing, Seymour Johnson AFB, NC
9th Munitions Squadron, Beale AFB, CA
20th Fighter Wing, Shaw AFB, SC
33rd Fighter Wing, Eglin AFB, FL
57th Wing, Nellis AFB, NV
388th Fighter Wing, Hill AFB, UT
28th Bomb Wing, Ellsworth AFB, SD
820th Red Horse, Nellis AFB, NV
332nd Air Expeditionary Wing, Joint Base Balad, Iraq
366th Fighter Wing, Mountain Home AFB, ID

AETC

56th Fighter Wing, Luke AFB, AZ
325th Fighter Wing, Tyndall AFB, FL

AFSOC

1st Special Operations Wing, Hurlburt Field, FL

AFSPC

45th Space Wing, Patrick AFB, FL
90th Missile Wing, F.E. Warren AFB, WY

AMC

87th Air Base Wing, McGuire AFB, NJ
92nd Air Refueling Wing, Fairchild AFB, WA
60th Air Mobility Wing, Travis AFB, CA
62nd Airlift Wing, McChord AFB, WA
375th Airlift Wing, Scott AFB, IL
436th Airlift Wing, Dover AFB, DE
43rd Airlift Wing, Pope AFB, NC

EXPLOSIVES SAFETY PLAQUES

cont.

PACAF

18th Wing, Kadena AB, Japan
51st Fighter Wing, Osan AB, Korea

USAFE

31st Fighter Wing, Aviano AB, Italy
48th Fighter Wing, RAF Lakenheath, UK
52nd Fighter Wing, Spangdahlem AB, Germany
86th Airlift Wing, Ramstein AB, Germany
100th Air Refueling Wing, RAF Mildenhall, UK

CATEGORY II

AFMC

Air Armament Center Weapons Safety,
Eglin AFB, FL

AFSOC

1st Special Operations Equipment Maintenance
Squadron, Hurlburt Field, FL



NUCLEAR SURETY PLAQUES

CATEGORY I

ACC

509th Bomb Wing, Whiteman AFB, MO
2nd Bomb Wing, Barksdale AFB, LA

AMC

62nd Airlift Wing, McChord AFB, WA

AFMC

708th Nuclear Sustainment Squadron, Kirtland AFB, NM

AFSPC

741st Missile Squadron, Minot AFB, ND

USAFE

704th Munitions Support Squadron, Spangdahlem AB,
Germany
701st Munitions Support Squadron, Kleine Brogel AB,
Belgium
703rd Munitions Support Squadron, Spangdahlem AB,
Germany

GROUND SAFETY PLAQUES

AETC

17th Training Wing, Goodfellow AFB, TX
71st Flying Training Wing, Vance AFB, OK
81st Training Wing, Keesler AFB, MS
325th Fighter Wing, Tyndall AFB, FL

AFRC

315th Airlift Wing, Charleston AFB, SC

ACC

33rd Fighter Wing, Eglin AFB, FL
4th Fighter Wing, Seymour Johnson AFB, NC
20th Fighter Wing, Shaw AFB, SC
28th Bomb Wing, Ellsworth AFB, SD
57th Wing, Nellis AFB, NV
388th Fighter Wing, Hill AFB, UT

AMC

305th Aerial Port Squadron, McGuire AFB, NJ
375th Airlift Wing, Scott AFB, IL
721st Aerial Port Squadron, Ramstein AB, Germany
725th Air Mobility Squadron, Rota, Spain
727th Air Mobility Squadron, RAF Mildenhall, UK
730th Air Mobility Squadron, Yokota AB, Japan
734th Air Mobility Squadron, Andersen AFB, Guam
92nd Air Refueling Wing, Fairchild AFB, WA
62nd Airlift Wing, McChord AFB, WA
87th Air Base Wing/305th Air Mobility Wing,
McGuire AFB, NJ

USAFE

86th Airlift Wing, Ramstein AB, Germany
100th Air Refueling Wing, RAF Mildenhall, UK

PACAF

8th Fighter Wing, Kunsan AB, Korea
35th Fighter Wing, Misawa AB, Japan
51st Fighter Wing, Osan AB, Korea
354th Fighter Wing, Eielson AFB, AK

AFSPC

45th Space Wing, Patrick AFB, FL



Congratulations!



AIR FORCE SAFETY AWARD WINNERS FOR 2009



Secretary of the Air Force & Chief of Staff Safety Awards

Secretary of the Air Force Safety Award, Cat I – AMC

Air Mobility Command's mishap prevention program produced outstanding results in a number of areas. AMC had an outstanding FY09 Winter Safety Campaign that focused on results, culminating in the first zero-fatality winter period in seven years and producing the lowest Class A mishap rate for like periods in AMC history.

Secretary of the Air Force Safety Award, Cat II – USAFA

The United States Air Force Academy's aggressive mishap prevention program saw an 83 percent off-duty fatality reduction from the FY02 baseline, and their Summer Campaign resulted in zero cadet fatalities for the seventh year in a row.

Col. Will L. Tubbs Memorial Award, Cat I – AMC

Air Mobility Command's best practices and strengths in key safety programs led to outstanding world-class initiatives. The excellent use of trends analysis to identify command high-interest areas and extensive oversight of mishap reports served as a benchmark for all major commands, greatly enhancing their traffic safety programs.

Col. Will L. Tubbs Memorial Award, Cat II – AFOTEC

Despite having a dynamic, fast-paced operations tempo, Air Force Operational Test and Evaluation Center only experienced three on-duty military mishaps. In addition, the organization superbly managed the "101 Critical Days" Campaign, resulting in zero fatalities.

Maj. Gen. Benjamin Foulois Trophy – AFSOC

Air Force Special Operations Command's exceptional flight safety mishap prevention program resulted in a zero Class A rate. The command flew over 80,000 wartime hours with remotely piloted aircraft, resulting in a Class A rate of 5.38, which is lower than the Air Force rate of 8.96.

CSAF Individual Safety Award – Lt. Col. Christopher Stricklin (14 FTW, AETC)

Lt. Col. Stricklin led and managed flight, ground and weapons safety programs for 3,000 personnel, including 20 essential safety personnel who provided over 3,120 annual hours of on-call service. As a direct result of his efforts, flight mishaps were reduced in nearly every category: down 50 percent in Class A, 70 percent in Class C, 44 percent in Class E and 50 percent in controlled movement area violations.

Koren Kolligian Jr. Trophy – Lt. Col. Joseph Santucci (99 RS, ACC)

On Feb. 12, 2009, during a U-2 aircraft training mission, Lt. Col. Santucci encountered a runaway pitch trim emergency upon descent from above flight level 600. Hindered by his full pressure suit and the exhausting requirements of maintaining aircraft control amidst extreme flight control forces, Lt. Col. Santucci was able to restore control of the nearly uncontrollable aircraft and then skillfully coordinate with his chase car pilot to safely recover the U-2 aircraft.

Colombian Trophy – PACAF

The 35th Fighter Wing, Misawa AB, Japan, had a most impressive year, flying more than 16,000 hours and 8,000 sorties with zero Class A, B or C mishaps, an accomplishment that has only happened three times in 24 years of F-16 operations. The wing expertly handled over 50 flight emergencies with zero losses or damage and was the only F-16 wing in the Air Force without an aviation mishap.

SICOFAA Flight Safety Award – AFSOC

The 6th Special Operations Squadron, Hurlburt Field, Fla., set the standard for operational safety in FY09, flying and fighting on five continents without a Class A, B or C mishap, despite operating eight different aircraft, to include both rotary and fixed wing. The squadron safety office executed 365-day persistent engagements that directly impacted flight and ground operations in a volatile area of joint/combined exchange training programs.