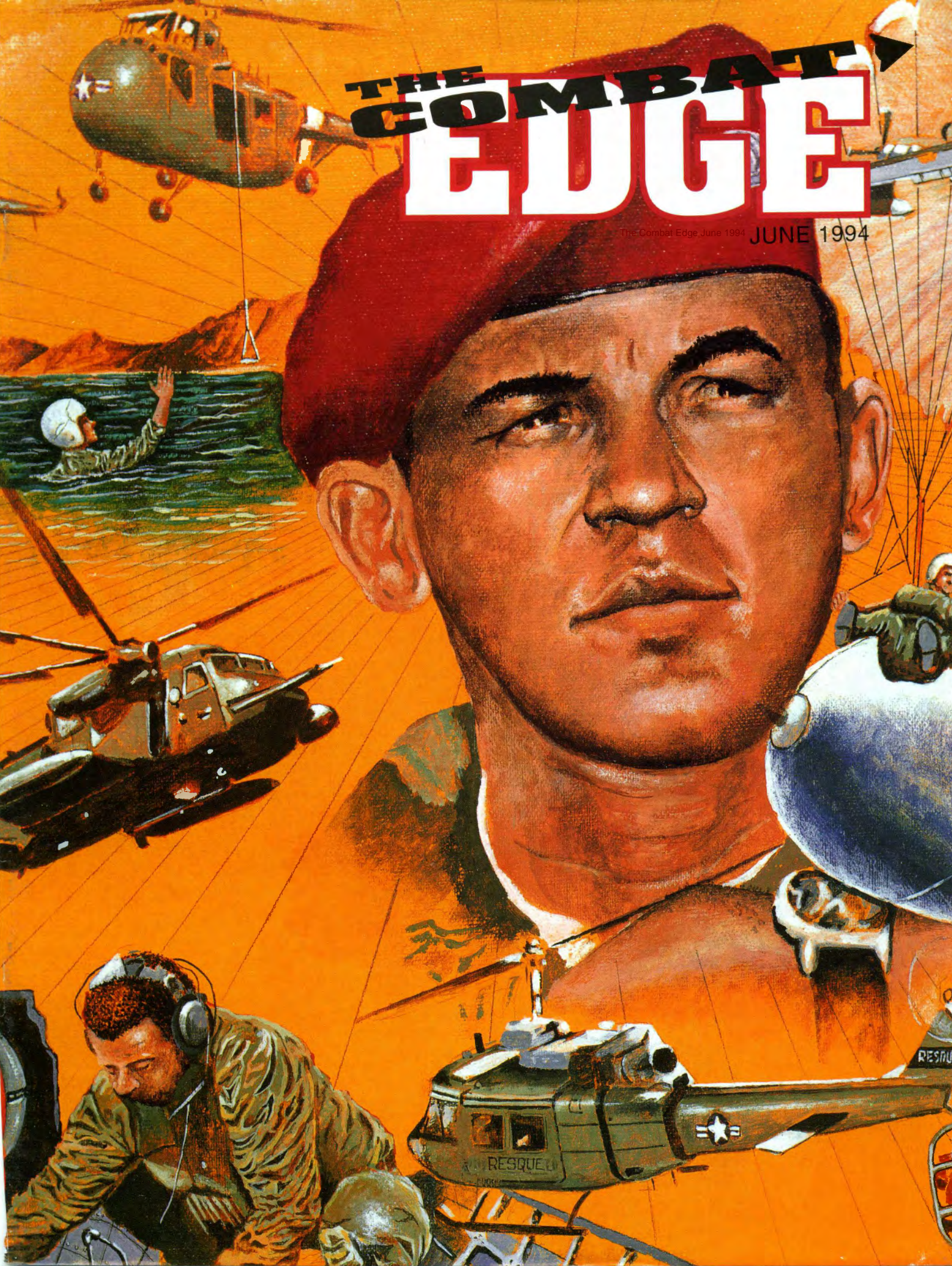


THE COMBAT EDGE

The Combat Edge June 1994 JUNE 1994





THE COMBAT EDGE

Air Combat Command
Safety Magazine

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ACC ACTION PLANNING, SAFETY, AND YOU!

Maj Gen James M. Hurley
HQ ACC/XP
Langley AFB VA

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COMBAT RESCUE

Air Combat Command created the Combat Rescue School to ensure combat rescue forces can interface with crew members. This avenue of communication provides the best opportunity for meeting the common objective of a successful survivor recovery. The Combat Rescue School, established under the USAF Weapons and Tactics Center and the 57th Wing, is the focal point of rescue expertise within the Combat Air Force.

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ABOUT THE COVER

This month's cover and center art were contributed by Mr. John Cooper, 652nd Air Base Group Information Support Flight, McClellan AFB CA. By December 1968, Sergeant Steve M. Northern, a pararescueman, had completed 30 months in Southeast Asia and personally recorded 51 combat saves. He was awarded two Silver Stars and numerous Air Medals during his tours. Sergeant Northern was killed in 1970 in an industrial accident in Los Angeles, CA.

JUN 94

ACC SP 127-1 VOLUME 3 ISSUE 1

you can have on safe execution of the mission, you must understand your role in the mission itself. This is where strategic planning comes in — it exists to answer the essential questions for everyone in our organization:

*Where are we headed?
What is my role in this effort?
How am I doing?*

We use a flexible and dynamic model to answer these questions. Over the past two years, it has evolved and improved based on feedback from those who have used it throughout the command. The current, evolving version appears below and has changed to be more responsive to our needs and more descriptive of the ACC Quality operating style.

The model emphasizes two basic types of planning: **Strategic Planning** and **Performance Planning**. In combination, we refer to both as “ACC Action Planning” because that’s our focus—to plan for action, not just for the sake of having a plan. The entire planning process is focused on the long-term Air Force vision and each part consists of three essential elements as shown in figure 1.

A **vision** statement provides an overarching statement or decision on what the organization wants to be like at a future point in time. The Air Force Vision is:

*Air Force People
Building the World's
Most Respected
Air and Space Force...
Global Power and Reach for
America*

That vision is a starting point; from it we develop our strategic plan to define the mission, goals and objectives, and outcome-oriented or “bottom line” measures of success.

A **mission** statement is intended to describe an organization’s reason for existence — a broad statement expected to remain in effect for an extended period of time. In ACC, our mission is:

*Air Combat Command
Professionals
Providing the World’s Best
Combat Air Forces
Delivering Rapid, Decisive
Air Power Anytime,
Anywhere*

With the mission statement as a guide, an organization can then address **goals and objectives** for the future. A goal is a broad statement describing a desired future condition or achievement, without being specific about how

much or when. A current ACC goal is to **Improve Combat Capability**. Another goal is to **Improve Safety Performance** because improved safety performance equals sustained Combat Capability through resource protection and mishap prevention 2. To complement our goals, we develop objectives — specific statements of shorter term conditions or achievements that include measurable end results to be accomplished within specific time limits. Linked to goals, these quantifiable objectives provide en route checkpoints to let everyone in the organization know how they are doing relative to achieving longer-term goals. In order to quantify our combat capability, one of our objectives for 1994 is to **Attain C-1 or C-2 Readiness Levels for all ACC and ACC-Gained Squadrons**. Correspondingly, in order to quantify our safety performance, another one of our objectives for

Figure 1. ACC Strategic Planning Model

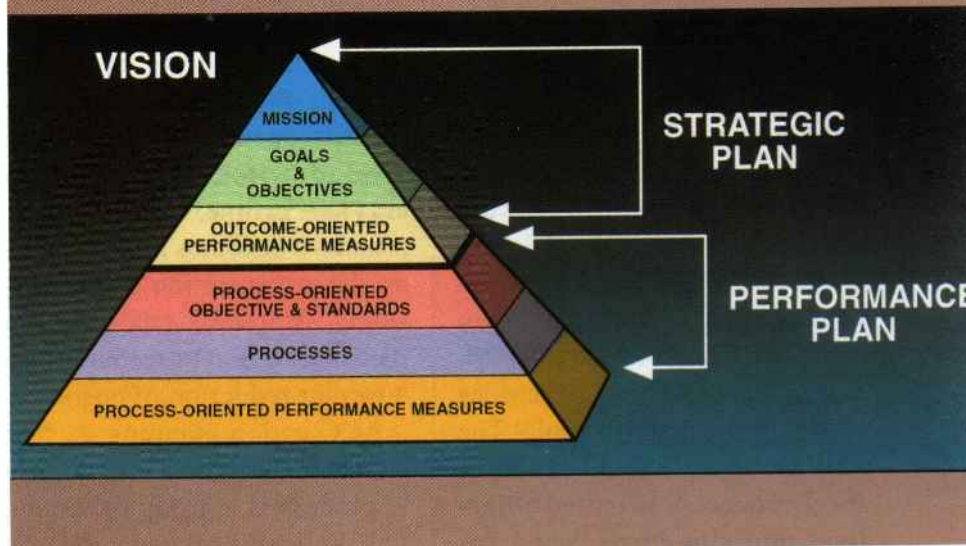




Figure 2. The Strategic Plan

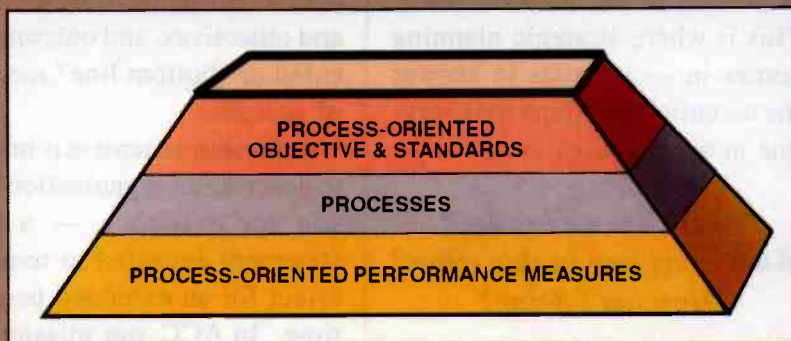


Figure 3. The Performance Plan

1994 is to **Maintain the FY 93 ACC and ACC-gained aircraft mishap rate below 1.6 per 100,000 flying hours.**

Outcome-oriented or bottom line measures are the “vital signs” of the organization. Taken over time, they communicate whether the mission, as expressed by goals and objectives, is being achieved. **Mission Capable Rate** is an example of one of an organization’s vital signs, as is **Mishap-Free Flying Hours.**

With the organization’s overall strategic planning as a guide, subordinate parts of the organization can focus on specific elements of performance — the key processes that contribute to the mission. If the examples we used above were at the MAJCOM level, then the ones that follow could be at the wing level, or even further down the chain. This is where the work that each and every one of us does become immediately visible. The starting point is a definition of specific **process-oriented objectives and standards**, standards

that we will hold ourselves to personally and organizationally. An example is the supply contribution to mission capable rates. For F-16s, our standard is to limit the percent of time the system is **not mission capable due to supply** shortages to no more than 7 percent. Performance objectives and standards are useful in controlling costs, but they are especially valuable from a safety perspective, for they give us daily goals to “shoot for,” and they keep us focused on the mission. In conjunction with sustaining the standards in terms of performance, the organization also focuses on the cost of a given level of performance. The synergy here in time, work, and safety practices becomes highly visible as the organization’s increased safety awareness contributes to its conservation of resources and a further reduction of costs.

ACC action planning is, from start to finish, based on **processes**. A process is a group of sequential, logically related tasks that

use organizational resources to provide a product or service to internal or external customers. **Inventory control** is a process employed wherever parts or supplies are necessary inputs to key processes. The bottom line is that in every action to meet our goals and objectives, and ultimately our mission, processes define how we do our job. Do we do it smartly, efficiently, and safely? The most effective way to determine the best procedures for a given process is through benchmarking — and benchmarking depends on data. As Vince Lombardi once said, *“If you’re not keeping score, you’re only practicing.”* The “scores” or data that tells us how well our processes are working is called **process-oriented measurement** or metrics. Performance-oriented measures tell us whether a process is under control in terms of variations in output. They can also measure product quality as well as the cost and quality of inputs. Weapons

Safety personnel at the wing level use **Quality Assurance observations** and **Load Crew Standardization Inspections** to measure compliance with technical orders for the purpose of improving weapons safety performance.

The overall result of this planning process is a living, dynamic plan for action — from the long-range, strategic vision for the future to the near-term focus on key processes that provide the basic foundation of quality. It allows each of us to see the particular role we have in not only the execution of our plans, but in their development as well. Aside from its usefulness in keeping us focused on the mission, and hence on safety in its accomplishment, the model actually mirrors the

“safety process” in action throughout ACC. In support of the Air Force Vision and ACC’s mission, we develop goals for mishap-free flying hours or mishap-rates, then we break them down by aircraft type and mission. We seek out the phases of ground, weapons, and air operations that have the most risk and determine if that operation is a necessary one. If it is required to meet our mission, we then increase our awareness and education in those areas to make them as safe as possible while satisfying mission needs. We measure our progress and continually solicit feedback from everyone in the chain of command, from COMACC to the airman on the flight line. Most importantly, on a day-to-day ba-

sis, as we go about the tasks that support the mission, we look for ways to constantly improve our mission/safety performance, whether it’s a word of advice to a friend or cohort, or a major change to a technical order. That kind of participation is really what this is all about—it’s part of our operating style: top-down commitment and direction to a bottom-up, shared and empowered operating environment.

Working together — in an environment that fosters trust, teamwork, and continuous improvement — we will continue to provide the **World’s Best Combat Air Forces** — effectively and safely! ■

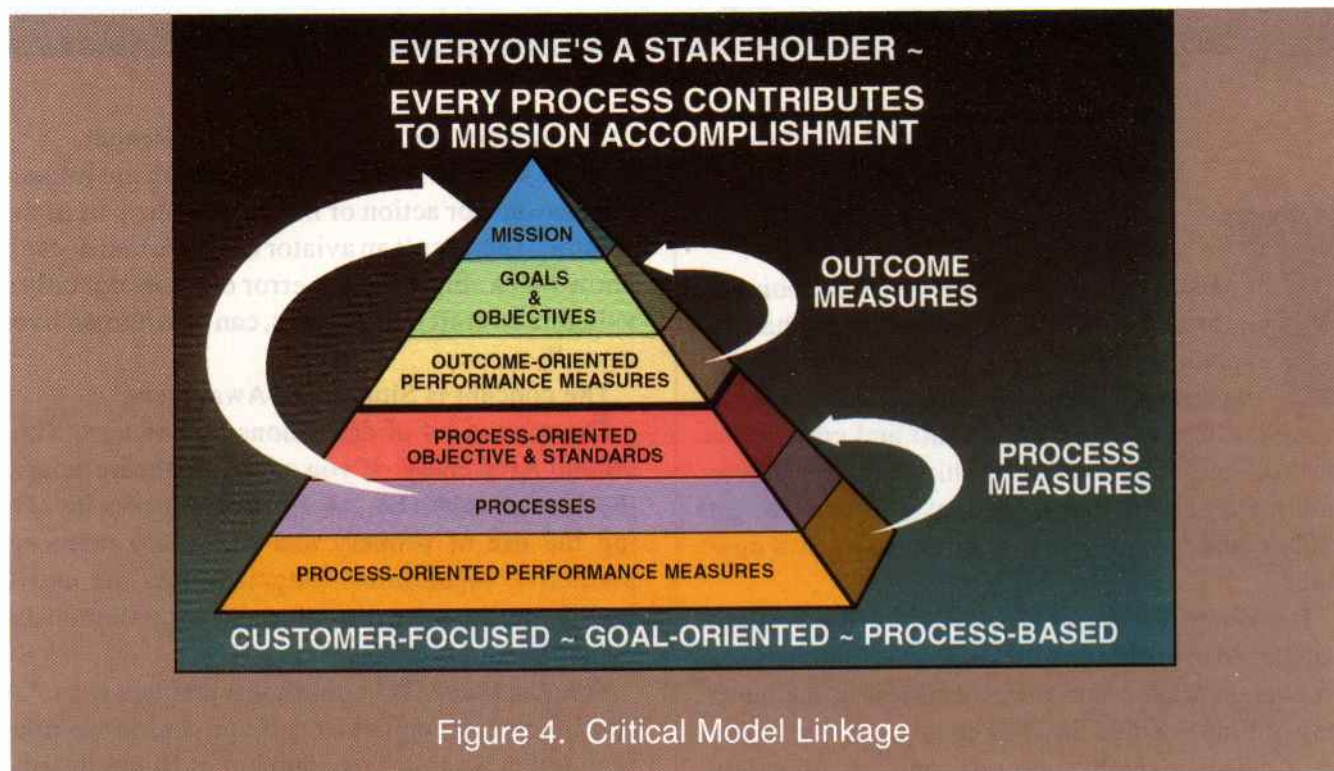



Figure 4. Critical Model Linkage



Another Statistic for the

GRIM REAPER

*Lt Col Jim Teigen
HQ ACC/SEF
Langley AFB VA*

The Mishap Board President was at the point in his briefing to COMACC where he had to explain how and why a pilot who had flown a maneuver successfully before, had, for some reason, lost control of the aircraft and crashed — destroying the jet and killing himself. Was there any good reason that a maneuver flown almost daily could, on a single occasion, result in a mishap?

The Board President stepped from the podium and began to go through the reasons. He was trying to explain what could have occurred in the short gap of time it would have taken to go from a flying to a non-recoverable aircraft, and, to us safety

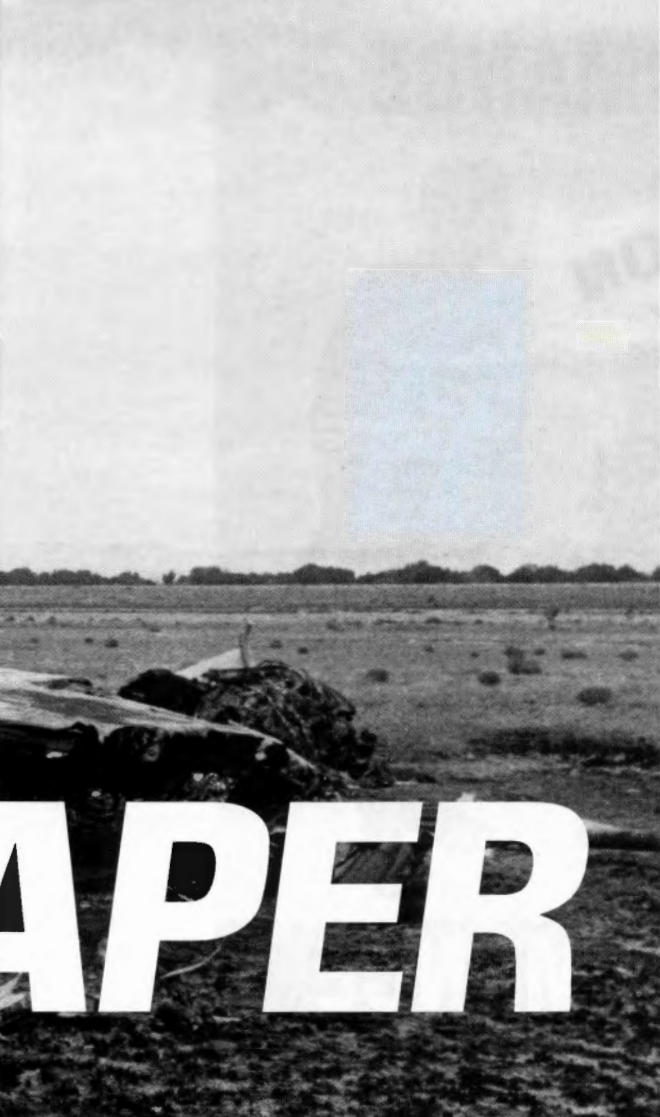
folks, another statistic for the Grim Reaper.

In the study of Human Factors, there are numerous reasons for action or inaction on the part of the aviator. There isn't an aviator out there that doesn't know that a single human error can cost not only a valuable aircraft but, at times, can cost human lives as well.

The concept is Situational Awareness.

There are a lot of definitions for the term Situational Awareness. If you asked the theoreticians, the answer would be, "A dynamic process involving the use of primary and secondary memory, predictive capabilities, judgment, and the native intelligence to integrate information continuously, instantly, and reliably."

The Air Force XO community defines it as, "A continuous perception of self and aircraft in relation to the dynamic environment of flight, threats,



and mission, and the ability to forecast, then execute tasks based on that perception.”

Both of these definitions are certainly right in their own arena. I have found that the simplest is the best, so I like to think that Situational Awareness (SA) is knowing and correctly processing the information you need to do the mission.

There is a helpful diagram (Figure 1 on page 10) which shows SA and how it impacts human performance. It involves all the options the aviator has at hand: Perception, as it interfaces with memory (and I'd have to add procedures here), Prediction which leads to Prioritization that drives Performance. This process is a continuous loop.

As soon as the aviator perceives the situation and predicts the outcome, he prioritizes the need to act, and then takes the action to change the performance of the aircraft. As an example, suppose the

aircraft is found to be in a nose low attitude (reality/perception), the priority and performance is to recover the aircraft to level flight. The aviator remembers previous events, and the procedure to recover the aircraft, and predicts the future path of the aircraft. Prioritization then takes over as the airspeed and ground rush plus the altitude remaining are figured into SA. The pilot then takes appropriate action to recover the aircraft and continue the mission.

As examples go, that was really pretty simple.

Recently, in ACC we have had several mishaps which cost us the lives of our fellow aviators and numerous aircraft. We had an aviator who had flown a vertical and diving maneuver to recovery the day before the mishap. But on the mishap day, he failed to recover the aircraft before impacting the ground. In another mishap, the pilot turned his aircraft to set up for a pattern. During the turn airspeed became too low and the aircraft stalled at an altitude from which recovery was impossible.

In neither of these examples did the pilots plan to go out and lose it. Neither planned to make this their last fatal mistake.

What did happen? Nobody will ever know for sure. We know that SA was lost, but what was the little distractor that captured the attention of the aviator in each of these instances?

While the Board President went down the litany of reasons, all were plausible, but none were the decisive reason, I drifted back to my first mishap as an investigator.

The student was solo on a pattern only ride to the auxiliary field. As the student had climbed to radar contact and was to turn toward home base, he disappeared from the radar scope, and subsequently crashed.

We found the trim full nose down, but couldn't determine why. There were no shorts in the system and every connector we could find was intact with no evidence of FOD. We deduced (without any other evidence) that either the student pilot inadvertently induced the runaway trim or that there was an undiscovered mechanical reason for the nose down runaway trim. The bottom line was that once the trim had run full nose down, the student



could no longer cope with the situation and lost his aircraft and his life.

About a year later, I read an article where there had been an aviator on an orientation flight in a two-seat fighter. As the aircraft was climbing out of the low level environment, the observer dropped his checklist and bent down to get it. The aircraft began a series of rolls which completely surprised both aviators. The pilot was trying to control the jet, and the observer thought the pilot was pinging him. The observer raised his head and the rolling ceased. It took a while to reconstruct the situation; but the two lucky aviators figured out that by the observer bending over to get the checklist, the observer's helmet pushed the stick over and somehow activated the lateral trim switch. Both of those actions put the aircraft into a rapid rolling moment. The author went on to wonder if that had not been the reason for the runaway trim in my mishap investigation. Maybe the student dropped either

his checklist or more likely his inflight guide. Sadly, we will never know. It is just as plausible a reason as those offered by the board.

We have all heard the stories of aviators who delayed recovering the jet, simply because they had never seen that attitude, or they took a second longer to recognize the attitude, or stayed too long on a particular gauge. Each one came home because there had been enough altitude left to recover the jet.

The Human Factors experts tell us that the reasons aviators lose SA are due to any of the following: Distraction, Channelized Attention, Task Saturation, Inattention, Habituation, Negative Transfer, Expectancy, Complacency, Technical Errors, or Trouble Shooting Errors.

If the author was right, the student could have lost his SA by distraction and channelized attention caused by dropping either his checklist or his inflight guide. When he looked up, the jet was not

flying the way he expected it to, and may have slowed his reaction as he was trying to process why the jet was performing the way it was when the initial parameter did not include that resultant maneuver. You know, last time I checked, the jet was straight and level, why is it now pointed at the ground?

Something happened in each of the mishap jets. Some small thing distracted the pilots for the briefest of moments, each with the same fatal result. If the same event had occurred at altitude, these wouldn't have even made it to Hangar Flying sessions, or even good bar talk stories. If they had occurred closer to the ground and recovery was in jeopardy, there might have been an admission, but I doubt it.

Pilots traditionally have been described as: achievement oriented, having low tolerance for personal mistakes, having a controlling personality, and they tend to ignore (or compartmentalize) internally their emotional states. Both of these fellow aviators were also described as having those traits. If you are honest with yourself and are an aviator, you will also see these traits in yourself.

So how can the average aviator recognize the loss of SA in themselves or in the others in their flight or their own cockpit? Some of the leading "warning flags" are: a feeling of being behind the jet; a poor performance on basic maneuvers; missed tasks and checks; simple switch errors; erratic aircraft control; missed radio calls; and misprioritization of tasks.

The average aviator can correct this loss of SA by: going back to basic priorities (terrain clearance, mission critical and then non-critical tasks); talking to others or agencies to build the SA; calling knock-it-off, regroup, rebriefing, and trying it again. The responsibility is on the individual to communicate the SA concern and evaluate the response from your flight member, or within your own aircraft.

The real trick to aviating and aviating safely is to fly the jet.

Sounds real simple, but that is the real reason that SA is lost. Whatever the distractor, inside or outside of the cockpit, you have to remember one thing — just that one thing. Keep flying the jet!

Following several of the mishap out briefs this last year, the staff has filed out of the briefing room thinking that the PK of the ground remains 1.0. In most of those briefings, the concept of loss of SA has been used to explain why a good jet and good aviator failed to come home at the end of the mission.

Maybe it was something as simple as a dropped item. Maybe it was a momentary pause when momentary pauses weren't allowed. Maybe it was a simple switch reset. The bottom line was that in that short span of time the aircraft continued to aviate, without the active involvement of the aviator. We need to correct that.

ACC, as do the other MAJCOMs, has a Cockpit/Crew Resource Management program (CRM). In ACC we also have an Aircrew Attention Awareness Program (AAAMP) and a Realistic Training Review Board (RTRB). Each serves a purpose to educate and teach when SA can be lost (lessons learned) and how the aviator can prevent it or counter it when it happens. I highly recommend that we all take the opportunity to listen to the instructions and attempt to apply them in each and every flight.

I can guarantee that the professional aviators that we have lost recently would stand there in front of your hangar flying session or safety meeting and tell you (if they could) that flying the jet comes first, losing SA can cost more than your jet.

The Board President continued listing his reasons for the loss of SA in this latest mishap. All of the reasons were plausible. Some more than others, yet each could have been the reason. You could see the recognition in the eyes around the table. The reasons being given were recognized by each of the aviators, for they too had similar experiences. The only difference was that these aviators, now staff pilots, were not statistics for the Grim Reaper. They had not experienced the same loss of SA; they had flown the aircraft and lived for another day. This unlucky aviator from the mishap briefing, unfortunately, was another statistic for the Grim Reaper. ■

ACColades

QUESTIONS OR COMMENTS
CONCERNING DATA ON THIS
PAGE SHOULD BE
ADDRESSED TO HQ ACC/SES,
DSN: 574-3814

	TOTAL			ACC			ANG			AFR		
	APR	THRU APR		APR	THRU APR		APR	THRU APR		APR	THRU APR	
		FY94	FY93		FY94	FY93		FY94	FY93		FY94	FY93
CLASS A MISHAPS	0	11	12	0	6	6	0	5	5	0	0	1
AIRCREW FATALITIES	0	4	6	0	2	5	0	2	1	0	0	0
* IN THE ENVELOPE EJECTIONS	0	9/1	10/0	0	4/0	4/0	0	5/1	5/0	0	0	1/0
* OUT OF ENVELOPE EJECTIONS	0	0/1	0	0	0/1	0	0	0	0	0	0	0

* (SUCCESSFUL/UNSUCCESSFUL)

CLASS A MISHAP COMPARISON RATE

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

ACC	FY 93	2.0	3.1	2.2	1.6	1.7	2.1	1.7	1.7	1.7	1.6	1.6	1.8
	FY 94	0	1.1	1.5	1.8	2.4	2.4	2.0					
8 AF	FY 93	0	5.2	3.7	2.7	2.1	1.6	1.4	1.2	1.0	0.9	0.8	2.3
	FY 94	0	0	0	0	0	0	0					
9 AF	FY 93	6.7	6.5	4.4	3.3	3.9	3.1	2.7	2.3	2.7	2.4	2.2	2.0
	FY 94	0	0	0	2.1	3.3	4.0	3.2					
12 AF	FY 93	0	0	0	0	0	0	0	0	0	0	0	0
	FY 94	0	0	2.0	1.6	1.3	1.1	.9					
DRU	FY 93	0	0	0	0	0	2.8	2.4	4.2	3.7	3.3	4.4	4.0
	FY 94	0	14.9	8.6	6.7	11.2	9.5	7.9					
ANG	FY 93	0	2.2	2.9	2.1	3.5	2.9	3.1	2.7	3.4	3.0	3.2	3.3
	FY 94	0	1.9	2.6	2.2	2.7	3.7	3.2					
AFR	FY 93	0	0	8.0	5.9	4.8	4.0	3.4	3.0	2.7	2.4	2.2	4.0
	FY 94	0	0	0	0	0	0	0					
TOTAL	FY 93	1.3	2.7	2.7	2.0	2.4	2.4	2.2	2.1	2.3	2.1	2.1	2.4
	FY 94	0	1.2	1.7	1.8	2.3	2.7	2.1					
MONTH	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

* (HOURS NOT AVAILABLE)

ACCOLADES

HONOR ROLL

Units without a "Command-Controlled" Class A flight mishap since the stand-up of ACC on 1 Jun 92, or their respective assimilation into the command.

1 FW
4 WG
5 BW
6 ABW
24 WG
27 FW
28 BW
33 FW
35 WG
42 BW
55 WG
65 ABW
79 TEG
92 BW
93 BW
94 AW
99 WG
102 FW
103 FG
104 FG
106 RQG
107 FG

109 AG
113 FW
114 FG
116 FW
117 RW
118 AW
119 FG
120 FG
122 FW
123 AW
124 FG
125 FG
128 FW
129 RQG
130AG
131 FW
132 FW
133 AW
135 AG
136 AW
137 AW
138 FG

139 AG
142 FG
143 AG
144 FW
145 AG
146 AW
147 FG
148 FG
149 FG
150 FG
152 ACG
152 RG
153 AG
154 ACG
156 FG
157 ACG
158 FG
165 AG
166 AG
167 AG
169 FG
174 FW

175 FG
177 FG
178 FG
179 AG
180 FG
181 FG
185 FG
187 FG
188 FG
189 AG
191 FG
192 FG
301 FW
302 AW
314 AW
347 FW
355 WG
388 BG
366 WG
388 FW
403 AW
416 BW

419 FW
440 AW
442 FW
482 FW
507 FG
509 BW
552 ACW
906 FG
908 AG
910 AG
911 AG
913 AG
914 AG
916 ARG
924 FG
926 FG
928 AG
930 OG
934 AG
939 RQW

Summer Vacation Tragedies

Lt Col Joseph M. Marchino II
552 ACW/SE
Tinker AFB OK

Well, that annual ritual known as "March Madness" is finally over. No, I'm not talking about the NCAA basketball tournaments. The genuine, original "March Madness" is SPRING BREAK! When not only students but also teachers, parents, and just about anyone else with a valid excuse hits the road for warmer climates and sandy beaches, or perhaps the ski slopes of Colorado. Considering how particularly severe this past winter has been, I imagine there were more participants this year than ever. All this could only mean one thing — summer vacation! The 101 Critical Days of Summer started on Memorial Day and will continue through Labor Day.

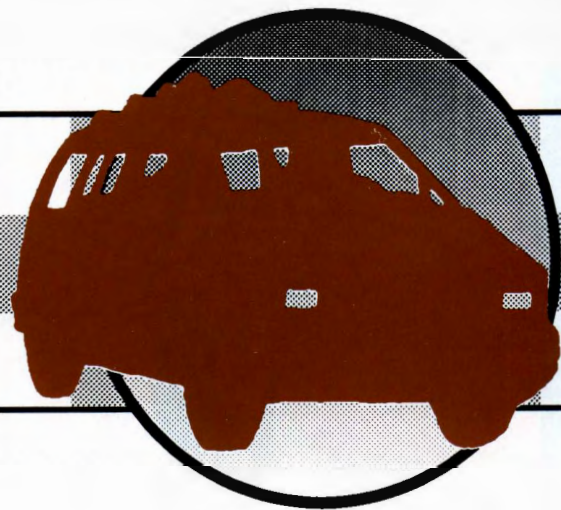
Just like my own family, I wouldn't doubt that many of you are also making plans for your summer vacations. Ah yes, vacation — when Dad piles everyone including their pets into the family motor home and drives 30 hours straight (of course, the RV was packed the night before so they could leave as soon as Dad got home from work) bypassing numerous scenic points of interest (like Wall Drug, South Dakota) so as to arrive at grandparents, Disney World, Mt Rushmore, or wherever in minimum time.

Naturally Mom and big sister Sally have been breaking out the frag (AAA and state travel brochures) and built an ATO (vacation schedule) that looks similar to a VIP itinerary. A typical see-all-we-can-see-in-one-day Washington DC vacation might look like this:

0700-0745, jogging around the Washington Mall; 0745-0800, breakfast at Hardees; 0800-0815, Tomb of the Unknown Soldier; 0815-0816, JFK Memorial; 0816-1000, shopping in Crystal City; 1000-1010, Jefferson Memorial; 1010-1030, Smithsonian Air and Space Museum; 1030-1032, family picture on Capitol steps; 1032-1200, shopping in Georgetown; 1200-1205, lunch at McD's; 1205-1215, Vietnam Wall; 1215-1400, stand in line for Washington Monument; 1400-1410, panoramic views of city from Washington Monument; 1410-1415, Smithsonian Natural History Museum; 1415-1419, Natural Archives; 1419-1600, shopping at Landover Mall; 1600-1608, visit Socks, the First Cat; 1608-1635, National Zoo; 1635-1800, fight traffic on I-495; 1800-1841, attend 3-act play at Ford's Theater; 1841-1859, Union Station; 1859-1907, Supreme Court Building; 1907-1923, National Art Gallery; 1923-1930, Lafayette Park; 1930-1940, change baby Nathan's diaper near Reflecting Pool; 1940-1948, sunset photos at Lincoln Memorial; 1948-2135, shopping in Alexandria; 2135-2145, Domino's delivers to the Fairfax Motel 6.

Those of you with Type A personalities, kids, and spouses who live to shop know exactly what I'm talking about.

Then, thanks to ATM machines, you're off early the next morning for Six Flags Over Georgia for lunch and then to Birmingham, Alabama, that evening to watch Air Jordan play AA baseball because that's what little brother Dustin really



wanted to do this summer. About this time, Dad panics because he's realized that his leave is about over and he's got to be at work in two days. The next morning the air conditioner gives up the ghost just outside of Tupelo; of course, it's Sunday and there's not a mechanic available anywhere within....

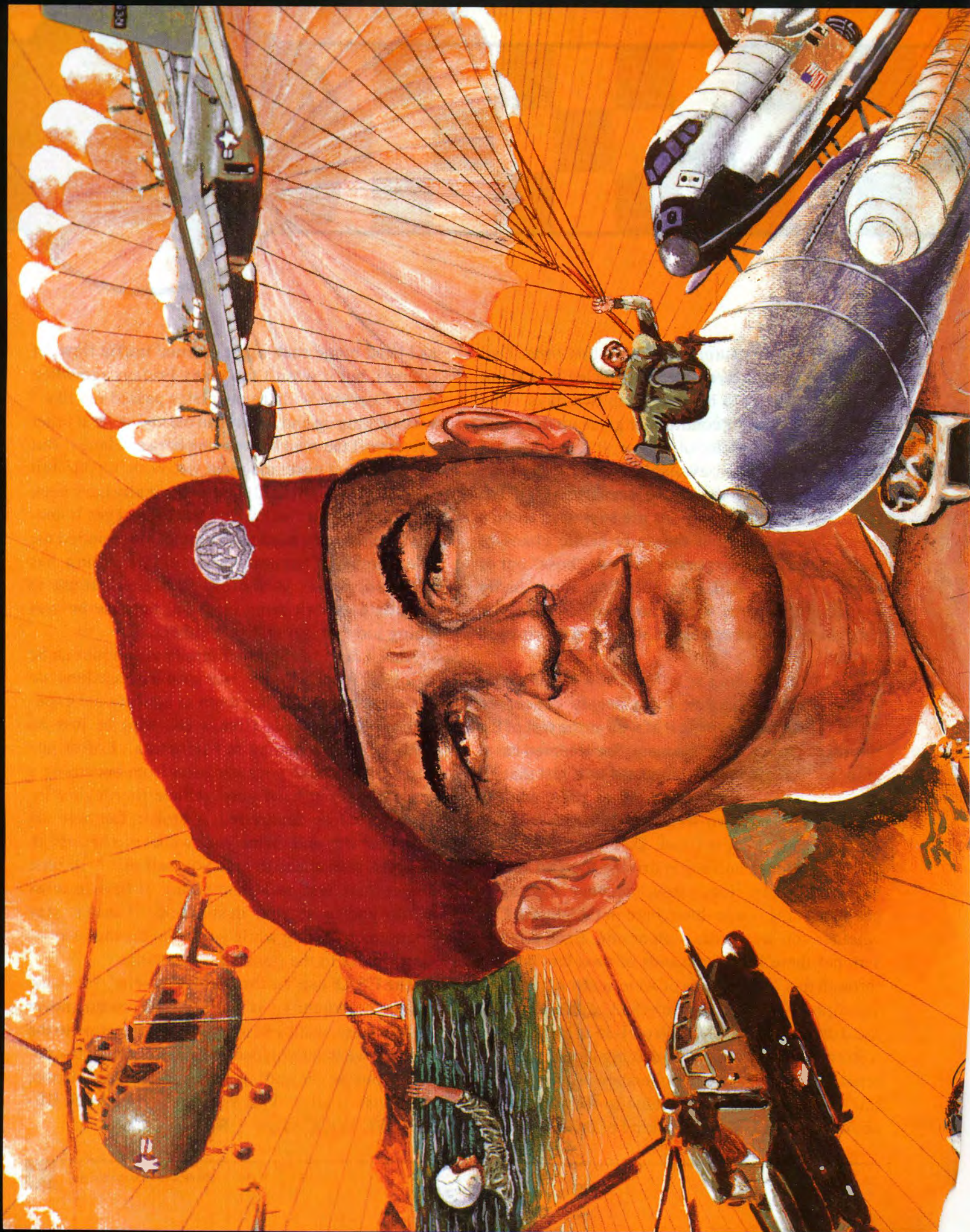
For many of us the above scenario is all too familiar. Summer vacations are supposed to be a time when we can put the daily hectic chaos of work and that grump person you call "boss" out of your mind and RELAX; enjoying some badly needed quality time with your family. Then you can return to work refreshed with a lot of vim and vigor.

Now, I'm not going to tell you how to plan your summer vacation. But, I am deeply concerned about your welfare during it as well as the rest of the summer. There are far too many documented cases of these "suicide runs" that turned into just that. It seems like we're always trying to pack what in reality should be a two-week vacation into only one week or less. People (read: Dads) get tired, start taking shortcuts, and begin driving too fast for the road conditions. Inevitably, someone's going to get hurt. This is a problem here in Oklahoma City whether you are on vacation or not. Each day this summer there'll be thousands of travelers passing through this "Crossroads of America" on their own vacations. The cumulative effect of these and the local drivers doing 65+ mph on I-35 is good reason to employ sound defensive driving tactics. Unfortunately, even service members are not immune to this effect and often contribute to the problem. I admittedly am a 60-65 mph kind of driver on I-240

as I head home each night (normal traffic flow, of course), but it wasn't too many Fridays ago when a red Corvette with Texas plates passed me like I was backing up and nearly ran me and several other drivers off the road by weaving between lanes. But the thing that upset me most was noticing our unit patch on his flight suit. Could this really have been a member of our flock with a bad case of get-home-itis? I shook my head as the incident reminded me of a member of our unit who, as of this writing, has spent six weeks in Wilford Hall after failing to negotiate an exit ramp on I-240 because he was going too fast (no seat belt either).

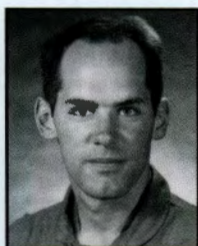
Alas, I digress. Summer family vacations can be a lot of fun and very memorable occasions no matter whether you use them as educational experiences for the kids (like a DC trip) or just do nothing but go fishing in Minnesota. I offer just three tips to keep your vacation from becoming a tragedy. First, have your vehicle thoroughly inspected before departure. A broken fan belt can ruin your day and shrink your wallet in a heartbeat. Second, plan ahead to give yourself plenty of time to get there and back, and plenty of time to relax while you're at your destination. Finally, stay focused on driving while you're on the highway — don't press to the point of exhaustion.

The USAF can't afford to lose anyone. We in the safety community, as well as unit commanders everywhere, want you to enjoy your vacation to the fullest; we want you back refreshed, ready to continue our never-ending national defense efforts; but most of all — **WE WANT YOU BACK BECAUSE WE CARE!** ■





Artwork contributed by:
Mr. John Cooper
652nd Air Base Group Information Support Flight
McClellan AFB CA



AIRCREW SAFETY AWARD OF DISTINCTION

*Capt Eddie Waters, Capt Glenn Dubois, Capt Brian Peck, Capt Gary Katz,
Capt Rob Russell, Capt Todd Phipps, 38 RS, 55 WG, Offutt AFB NE*

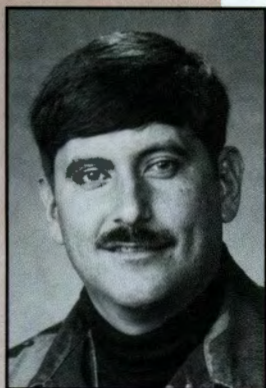


The first indication of trouble came when a crewmember in the mission compartment called the flight deck to report some flickering lights. Within 10 seconds, all three aircraft generators dropped off line. We lost all AC electrical power. Capt Waters placed the battery switch to emergency providing some DC power to critical systems. At this point we faced several problems. First, we had limited battery power. At the recommended level of equipment use, it would last for 1.5 hours. We had limited navigation capabilities and were dependent on a weather forecast that was more than 12 hours old. We had basic IFR instrumentation on the copilot's side of the cockpit, but we could only fly a ground radar directed approach. Also, we had no anti-ice protection and no

windshield heat. Therefore, we needed to avoid flying in weather, if possible. After landfall we would navigate visually to find the airfield or get within range of radar controllers. Considering the likely level of uncertainty in our position at landfall, we decided to use Goose Bay. At 30 miles, Goose Bay obtained radar contact and began issuing vectors for the approach. At this point, visual flight became impossible. Capt Dubois assumed aircraft control. Capt Waters began to configure the aircraft for landing using speeds for the estimated weight. We sighted the airfield at three miles, and Capt waters took control for the landing. He stopped the aircraft without anti-skid on a snow-covered runway without further incident.

CREW CHIEF EXCELLENCE AWARD

TSgt Jesus Hernandez, III, 4 FS, 388 FW, Hill AFB UT



While performing a final look over prior to launching aircraft 90-0812, Technical Sergeant Hernandez noticed fluid leaking out of a panel on the rear of the jet. He immediately informed the pilot of the situation and instructed his launch assistant to install the safety pins. Sergeant Hernandez proceeded to open the panel while the jet was running and noticed fuel leaking from around the engine fuel manifold. He then terminated the launch and had the aircraft shut down. Upon further investigation he

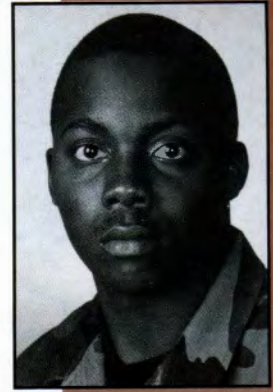
discovered that the fuel manifold seal was deformed and when pressurized had started to leak fuel. Had the aircraft been allowed to taxi to the end of runway, the engine bay would have filled with fuel creating an explosive environment. If this had ignited, the squadron would have surely lost an aircraft and possibly the pilot on the taxi-way. Thanks to his quick thinking and keen eye, Sergeant Hernandez prevented a hazardous situation from becoming disastrous.

FLIGHTLINE SAFETY AWARD OF DISTINCTION

SrA Kevin Williams, 355 EMS, 355 WG, Davis-Monthan AFB AZ

While performing a throttle quadrant change on aircraft 80-169, Senior Airman Williams noticed a transient T-38, from Beale AFB at the end-of-runway preparing for departure. After the aircraft initiated its take-off, Airman Williams observed a large object separate and roll alongside the aircraft. As the aircraft rotated a second later, the object continued to roll into the grass next to the runway. Airman Williams confirmed his sighting and attempted to notify the Davis-Monthan control tower. Unable to establish contact with the tower, he coordinated through the Davis-Monthan fire department, to the tower, the possibility of a dropped object. Having received clearance to go out onto the runway, Airman Williams found a

T-38 main tire that had shredded off the left main landing gear wheel. Due to his superior knowledge of wheels and tires, he immediately notified airfield management personnel the extent of tire that the T-38 had lost, which happened to be 95 percent (according to crash recovery personnel on the scene). Had the aircraft landed in a normal fashion without the left main tire, the left main gear could have sheared off, resulting in major destruction at high speed. Airman Williams' keen observation and expertise very possibly saved the aircrew and aircraft from grave injury and major damage. The T-38 performed a perfect emergency landing at Davis-Monthan without further incident.

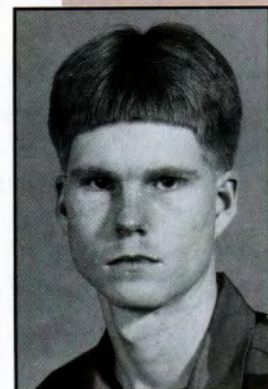
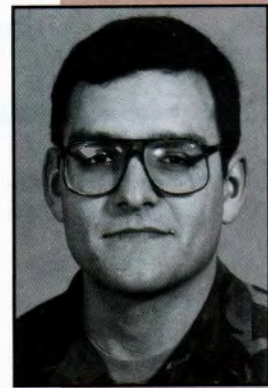


GROUND SAFETY INDIVIDUAL AWARD OF DISTINCTION

TSgt Alfonso P. Martinez, Amn Brent A. Foster, 33 CCS, 552 ACW, Tinker AFB OK

Airman Foster was driving a M1009 Blazer on a roving security patrol at a local exercise site. It's 0200 hours with snow on the ground and high winds. He drove first to the cantonment area when he noticed a smokestack from a heater in a General Purpose (G) medium live tent #15 had toppled over and was laying on the tent covering. Sensing a dangerous situation to the occupants if the heater pipes had become disconnected in the tent, Airman Foster radioed to Systems Control, who notified the Wing Operations Center and alerted Sergeant Martinez. Sergeant Martinez and Airman Foster proceeded to the live tent and found the heater on; a vent pipe section had come apart and smoke

engulfing the tent. They proceeded to wake everyone up and get them out of the tent. Sergeant Martinez shut down the heater and temporarily attached the vent pipes to the heater, aired out the tent until another section of pipe could be obtained and attached to the heater. Later investigation revealed that one of the vent pipe sections of the smokestack had not mated properly with another section and became disconnected due to the high winds the site had experienced that night. Airman Foster's alertness to an extremely dangerous situation and Sergeant Martinez's quick and proper reactions probably saved the lives of six personnel living in the tent.





UNIT SAFETY AWARD OF DISTINCTION

435th Fighter Squadron, 49 FW, Holloman AFB NM

The 435 FS "Black Eagles" is the first and only squadron to conduct initial and continuation training for Taiwan Air Force (TAF) pilots in the employment of combat air power. The 435 FS flying training syllabus covers the entire tactical spectrum from Basic Fighter Maneuvers (BFM) to Mission Employment (ME) exercises involving up to 12 fighters. Since its reactivation in May 1993, the "Black Eagles" have maintained the highest standards for both ground and flight safety while meeting the demands of this challenging syllabus. The unit has flown 3,700 sorties, 3,500 hours, brought 21 jets out of the "Bone Yard," and created an instructor cadre from scratch. While doing

this, the 435 FS has not suffered a single Class A, B, or C mishap. Unique considerations for training the TAF students include obvious language barriers and flying in one of the most congested environments in ACC. Aggressive involvement by the squadron safety officer with the squadron's Air Traffic Control (ATC) liaison trained both our pilots and tower controllers to avoid potentially disastrous conflicts. Result—reported incidents in Holloman AFB's traffic pattern were reduced to zero during the transition phase, a critical training period. The 435 FS has had tremendous success this year and the recent graduation of our first class without incident was the year's highlight.

OOPS Pardon Our Mistake Please!

The May 94 issue of *The Combat Edge* included the monthly Crew Chief Excellence Award winner; however, we inadvertently omitted the winner's name and unit. The winner of the Crew Chief Excellence Award for April 94 was:

CREW CHIEF EXCELLENCE AWARD

A1C Shawn M. Gressel, 334 FS, 4 WG, Seymour Johnson AFB NC

There I was doing a routine Preflight inspection on an F-15E that had not flown for several days. The main landing gear doors were open for a scheduled 90-day wash and corrosion inspection, so I decided to add a detailed wheel well inspection to the -6 Work Card inspection requirements. While examining the right main landing gear unlock mechanism, I discovered a cotter pin and nut missing off the jury brace downlock spring assembly. More than likely the cotter pin broke from stress and then the nut simply backed off. Had the bolt fallen out, the uplock mechanism would have failed causing an unsafe gear. In addition, the spring may have become jammed against the wheel during retraction damaging the bulkhead

or puncturing the main fuel line that runs through the wheel well. Further investigation revealed that 21 out of 65 jets were "bad" (all were repaired). The local checklist procedures have been changed to include inspection of this part. This change has been forwarded to ALC for inclusion fleet-wide. I've been taught that paying attention to detail is important and now I'm convinced it is a key element in flying safe jets. Again, we apologize for the omission and congratulations to Amn Gressel for a job well done!



*Maj Mark Giglio
HQ ACC/SEF
Langley AFB VA*

So there I was, 3 feet, zero knots, in the prone position. Sounds like the start of a good time doesn't it? Well, not so fast, I was laying on a doctor's exam table, getting 9 stitches in my thigh after slicing it open with a pair of loping shears (BIG scissors for cutting tree limbs). The clinic technicians were filling out paperwork as I was being sewed on; and, of course, the big question was, "How did this happen?" Nothing is more embarrassing than having to tell people how you screwed up. Being the brainwashed, HQ safety staff geek that I am, I thought "Gee, this would make a great article for the safety magazine."

So, how did I end up in this ignominious position? First off, I was in the middle of a move from off-base quarters to on-base housing and I was solo on all the cleaning, etc., associated with the move. It was Wednesday and I had to have the house ready for the landlord by Friday. The yard was the last item to be tackled, and the primary task was to clean up the hedges that had literally grown over the side of the house. The house we had moved into also needed to be squared away so we could settle down to a normal lifestyle, instead of living out of boxes and sleeping on the floor. Oh, did I mention I was on leave for the week and I had to be back to work on Monday?

Anyway, armed with my brand new, and very sharp, loping shears, I was engaged in the battle of the century with this horrific tangle of bushes. It's getting on toward noon, it's hot (Africa hot), I'm hungry, and the time crunch, plus the difficulty of the task, is having a predictable effect on my patience. I am cutting on the 2-inch diameter stem of a 15-foot high china berry bush that is wrapped by huge honeysuckle vines. I cut through the stem, grab hold of it, and try to pull it free from the tangle. No easy feat with the tangle it's entwined with, so I come up with this great idea to get a running start with this thing and yank it free. I still have the shears in my left hand, holding onto the upper handle so the lower one is free to swing down and

open the blades of the shears.

I don't know the exact mechanics of how the next segment of this drama occurs, but somehow Murphy's cohorts of chance and opportunity conspire as they always do. The handle of the shears catches on the ground as I am running, and the open, finely-honed, 3-inch long hook-shaped blade slices through my pants, skin, and into the muscle of my thigh. Luckily, it was a clean slice and didn't bleed very much. So I am off to the clinic for stitches and a tetanus shot.

Lessons. Right off there is the obvious one; don't keep sharp instruments around when you are engaged in activities that don't require them. I should have put the shears down before commencing that final run. However, we in the safety business always look deeper than the obvious.

The real problem here is that I didn't perceive any danger. People will perform tasks in a safe manner if they think there is danger or the potential for harm. If they don't see the harm, they have the tendency to skip the precautions. That holds true in yard work as well as the most complex tasks we undertake in the military. If the T.O. says to remove power from the system prior to performing an action, and the worker recognizes the danger, he will comply. **IF NOT, HE MAY NOT TAKE THAT SIMPLE PRECAUTION.** Sure, we know that, and under normal circumstances, so do most of the people we work with. However, mission stress, personal stress, adverse work environments, and other distractors can negate that simple caution. The single-mindedness required to do the job may short-circuit those normal cautious attitudes we all try to cultivate.

We can help ourselves and others by noting those stresses and alleviating them. Time crunches are a part of our way of life, but the job won't get done faster if you or your people are in the hospital (or the morgue).

Bottom line - I was lucky it was only 9 stitches and no real permanent damage. Whether it's flying an aircraft, fixing it, or trimming your hedges — be cautious, work smart, and try to stay aware of the "big to small" picture, i.e., don't get bogged down in the details to the detriment of losing the larger picture. **BE SMART, BE SAFE!** ■

Construction in Explosives Clear Zones

MSgt Donald L. Bigelow
HQ 8 AF/SEWS
Barksdale AFB LA

*"A Waste of Money
and Man-hours"*

Planning or completing construction or relocating operations within Explosives Safety Clear Zones, without Weapons Safety coordination, has been rearing its ugly head at Air Force installations. Time-and-again, Weapons Safety personnel receive "after the fact" notification about in-progress or completed construction and/or relocation of an operation into an explosives clear zone. Some examples: A Security Police Mobility Section facility relocated into a clear zone; Munitions Supply (AFK) personnel relocated within K-18 (Intraline Distance) of a Potential Explosive Site (PES) and their Combat Ammunition Supply (CAS-B) mainframe was planned for the same facility; or a contract was awarded to construct a Small Arms Range classroom/personnel facility within a clear zone.

Unfortunately, units are using, or I should say "wasting," money and valuable manhours just to find out that their plans to construct a facility or one that's completed are in violation of Explosive Safety Standards and can't be used for the intended purpose. Why does this occur? It's difficult and unwarranted to place blame on any particular base agency. For whatever reason, the wing Weapons Safety experts weren't included in the planning process for the proposed facility or operation.

Commanders, Civil Engineers, Contracting, Munitions Flight, or any other agency can help ensure that appropriate personnel and agencies are included in planning of facilities or relocation of operations. In addition, Weapons Safety personnel are responsible for ensuring commanders and appropriate base agencies are aware of and comply with explosives safety standards and clear zone limitations. They can do this in several ways. First, there must be a team effort throughout the

organization. Everyone must have a basic understanding of Explosives Safety Clear Zone limitations and inform the Weapons Safety personnel if they know of plans to do anything within an Explosives Safety Clear Zone. Commanders are usually involved in plans to build facilities or relocate operations since they normally control the money. Therefore, it would be beneficial if Weapons Safety personnel briefed clear zone limitations to commanders at the Quarterly Safety Council. Weapons Safety personnel can also attend the Facilities Utilization Board (FUB) meetings where coordination and approval action is granted for planned construction and relocating operations. They should develop procedures and educate appropriate base agencies on coordination of all plans associated with explosives facilities or clear zones with the Weapons Safety Office at both the initial stage and throughout the planning process. The key single source document for planning new facilities, of course, is the Base Comprehensive Plan. This map depicts all approved Explosives Safety Clear Zones, and the Weapons Safety NCO is not doing his job if he doesn't review it for currency. Of course, these are just some of my ideas. You can probably come up with ideas of your own to improve the process at your location. It basically boils down to teamwork and good communication throughout the organization.

Whatever it takes, we must create that teamwork environment, educate personnel, and ensure proper coordination when something involves Explosives Safety Clear Zones. Only then can we save precious time and limited resources and ultimately enhance the combat capability of Air Combat Command and the US Air Force. ■

EXPLOSIVES SAFETY

2000

*TSgt Neil P. Sipe
HQ ACC/SEW
Langley AFB VA*

The continued quest for Quality as a culture throughout Air Combat Command has exposed all of us to a lot of new terms. Terms like customer, benchmarking, continuous process improvement and empowerment. How do these terms affect us as explosives safety professionals? All of these terms are important, but I'd like to address empowerment and how this concept will affect us as explosive safety professionals for decades to come.

First, exactly what is empowerment? **Empowerment** is the act of placing accountability, authority and responsibility for processes and products at the lowest possible level. The term empowerment may be new to a lot of us; but if you think about its definition, the basic concept has been around for years. However, some managers/supervisors were reluctant to use it or did not understand this concept. The time has come for all of us to understand and utilize empowerment.

With the introduction of Air Force Instructions (AFI), empowerment will become a reality. AFIs are being written using the format of "What has to be done?"; not "How it has to be done." The typical regulations that we use today provide us detailed direction and guidance. The AFIs not only encourage empowerment, they demand it.

You're probably wondering how all of this applies to us as explosives safety professionals. Remember, AFIs are being written to give us only the basic mandatory and regulatory requirements. This means we will have to create and implement ways to meet those requirements and conduct business within our own units (empowerment). We are the explosives safety professionals and will be expected to provide sound advice to our commanders concerning our unique business.

For example, AFR 127-100 requires explosive safety waivers be approved by ACC/CV. AFI 91-201, when published, will stipulate that approval authority may be delegated to the level of command with assigned responsibility. This means explosive safety personnel at the unit level must provide the empowered commander with the required risk assessments and explosive safety quantity-distance criteria so the commander can make an educated, logical decision on the risks involved and acceptance of waived criteria.

Empowerment is not a new concept, but it is a term all of us will become very familiar with in our futures. When you read this article, I hope you didn't just focus on the term. Understand the importance of the concept and how it will affect you at your level of command. ■

TEAM SALUTES



The HQ ACC TEAM SALUTE recognizes a person, group of people or unit for notable displays of quality performance in the area of mishap prevention. TEAM SALUTE recipients are selected by the ACC Safety Awards Board from the monthly nominees for ACC safety awards. Periodically, TEAM SALUTE recipients will be featured in *The Combat Edge* magazine. Our congratulations to these recipients of the TEAM SALUTE.

Shortly after departure from Soto Cano Air Base, Honduras, we lost all number two system hydraulics. The load master spotted hydraulic fluid leaking from the windshield wiper arm actuator assembly located in the nose gear wheel well. As a result of the leak, the number two system lost all its hydraulic fluid. Because of this loss of fluid, the auxiliary hydraulic system was also inoperative leaving us without many hydraulic components including landing gear. We completed emergency landing gear extension procedures, but still had unsafe landing gear indications. After discussion with technical advisors on the ground through phone patch, we improvised and used mil spec oil to fill the emergency reservoir. After further hand pumping, this enabled us to get a safe gear indication. We dumped fuel to reduce landing weight and performed an uneventful landing. Total duration of the in-flight emergency was 2.5 hours.

Capt Patrick J. Johnson
1Lt Anthony D. Baade
SSgt Thomas V. Nugent
310 ALS 24 WG
Howard AFB PN

While performing supervisory post load inspections on aircraft scheduled to fly the next day's sorties, Master Sergeant Fisher discovered the aft detent of an AIM 9M on the station one LAU-129/A launcher disengaged. The missile had begun to slide aft. Realizing the consequences if not corrected, he immediately notified the weapons expeditor who took the appropriate action to correct the problem. Left undetected, the disengaged detent would have allowed the missile to continue sliding aft, resulting in the loss of a training weapon in flight. In addition, he prevented collateral damage to the aircraft along with persons and property below. Sergeant Fisher's attention to detail and "keen eye" are indeed a valuable asset to the 4th Fighter Squadron and to the 388 FW.

MSgt Phillip G. Fisher
4 FS, 388 FW
Hill AFB UT

While stationed at Dhahran, Saudi Arabia, Captain Dale Johnston flew a 4v6 DAI with French Mirage 2000s. The flight was uneventful until the RTB. Approximately 22 miles west of Dhahran, Captain Johnston received

the Master Caution light and the illumination of the Aft Fuel Light. Up until this point, the fuel indications were normal. Captain Johnston checked the fuel gauge in "norm" reading 1600 pounds of fuel in the totalizer, 600 pounds in the aft and 1000 pounds in the forward fuel cells. Captain Johnston then checked the fuel status in "reservoir," reading 0 pounds in the aft and 200 pounds in the forward. He then started a climb and headed direct for the active runway at Dhahran. Declaring an emergency, he established a 1 to 1 ratio for runway 34L. After starting his approach, Captain Johnston then made a call on Guard and directed a 2-ship of Mirage 2000s to break out. Captain Johnson executed a flawless straight-in SFO to runway 34L. The landing was uneventful and shutdown was accomplished before the engine flamed out. Maintenance later verified the aircraft did in fact have only 200 pounds of fuel in the reservoirs. Captain Johnston's quick thinking and timely response directly resulted in a saved aircraft.

Capt Dale Johnston
421 FS, 388 FW
Hill AFB UT

Fleagle

I BEEN AROUND
THIS FLYIN' BUSINESS
FER A LONG TIME, MACAW.

GOOD
FER YOU.

I HAS FLOWN WITH TH' BEST,
OUTLIVED A FEW AN' DONE
MY PART TO HELP TH'
YOUNG STICKS.

YOU IS ONE OF TH'
BLESSED, FLEAGLE.

HARRISON

SO, ALLOWING TH' FACT
THAT I HAS SEEN IT ALL
AN' DONE MOST...

WHY IS IT THAT TH' BOSS SAYS THAT
I GOT TO READ AN' KEEP UP WITH ALL
TH' NEW RULES AN' REGS?

YOU THINK, JUS' MAYBE, TH' BOSS WOULD
LIKE AN' OLD HEAD LIKE YOU TO READ
AN' CHECK ALL THIS NEW STUFF TO
SEE THAT IT'S RIGHT?

LORD HELP THEM TH'DAY WHEN
I IS NO LONGER AROUND.

© STAN HARRISON 1994

FLIGHT LINE

SEVERE STORM SAFETY SEMINAR

*MSgt Gary Reniker
442 FW/SEG
Richards-Gebaur AFB MO*

There's nothing like a good storm, deadly though it might be. Many residents in the Kansas City area love storms so much that they gave up a Saturday morning just to hear about them. About 370 people were attracted and brought their curiosity and questions to the first Severe Storm Safety Seminar. It dispelled in my mind, and a lot of others', some myths associated with severe storms.

The seminar was organized by Bill Bunting of the National Weather Service and included some sound advice presented by local media weather stars. Their advice went this way:

- * All it takes is 2 feet of water on the road to sweep your car away. So, never try to drive across a flooded street if you're not sure how deep the water is.

- * Lightning kills more often than a tornado. So, make sure you teach your children to get into the car or come into the house when they see lightning approaching.

- * Many severe storms occur while you sleep. Spend 40 bucks or so on a tone-alert weather radio and keep it in your bedroom. If the National Weather Service issues a storm watch or warning, the radio will go off like a police siren, awakening you and giving you the safety information you need.

- * It takes about 30 seconds for a tornado to level a house. Don't dally; get to the basement! Keep an old pair of shoes stashed down there in case there's debris to walk through when you come back up.

This seminar was a great way to also address weather myths, such as the "Tonganoxie Split," which says that tornadoes always go around the little town of Tonganoxie KS, about 35 miles west of Kansas City. "They don't," Bunting said. "If it does (go around), it's just luck. It's that particular

storm's behavior. Tonganoxie has as much chance of being hit by a severe storm as anybody else."

Some other myths addressed about tornadoes:

- * They don't hit in a city's downtown. "Of course they do."

- * Rivers stop tornadoes. "Of course they don't."

- * You can outrun a tornado in a car. "Not even in your wildest dreams."

One woman stood up and said she worked on the 25th floor of a downtown building. What should she do if a tornado siren sounded?

Try to get to an interior stairwell, the meteorologists told her. Better yet, start walking down the stairs. Do not use the elevator. If the power goes out, you could get stuck.

Another woman said she was afraid to go to her basement during a tornado because the gas lines might rupture and explode. Remember, The weather people told her, gas lines are usually underground and are made of steel. They won't blow over as easily as your house.

One point that was repeatedly emphasized was to have a plan. Know where to go, how to get there, what to take with you, and what to do when you get there. Rehearse your plan before you have to do it for real. You must be able to institute your severe storm plan at a moments notice — day or night.

Part of your plan should entail having the necessary supplies and emergency items on hand, conveniently located, and always ready for use. In the middle of a tornado is not the time to decide that you need batteries and bottled water. Have everything you think you'll need ready well before the storm arrives. Just a reminder, periodically check your emergency supplies to be sure they're still functional and usable. Advanced planning and preparation are the keys to weathering the storm — any storm. ■



*SMSgt Chuck Hassler
CRQS/RQT
Nellis AFB NV*

One of the loneliest moments you may experience as a crew member is looking up to see the muted shadow of a parachute canopy against a black night sky. You were warm and in total control only a moment earlier. Now you're falling to earth from a wounded airplane, and will soon impact terrain obscured by darkness. Suddenly tree limbs snap, branches scratch, and the hard landing on the snow covered rocks of a mountainside steals your breath away. Lying very still and in pain, you begin the ordeal of a survivor.

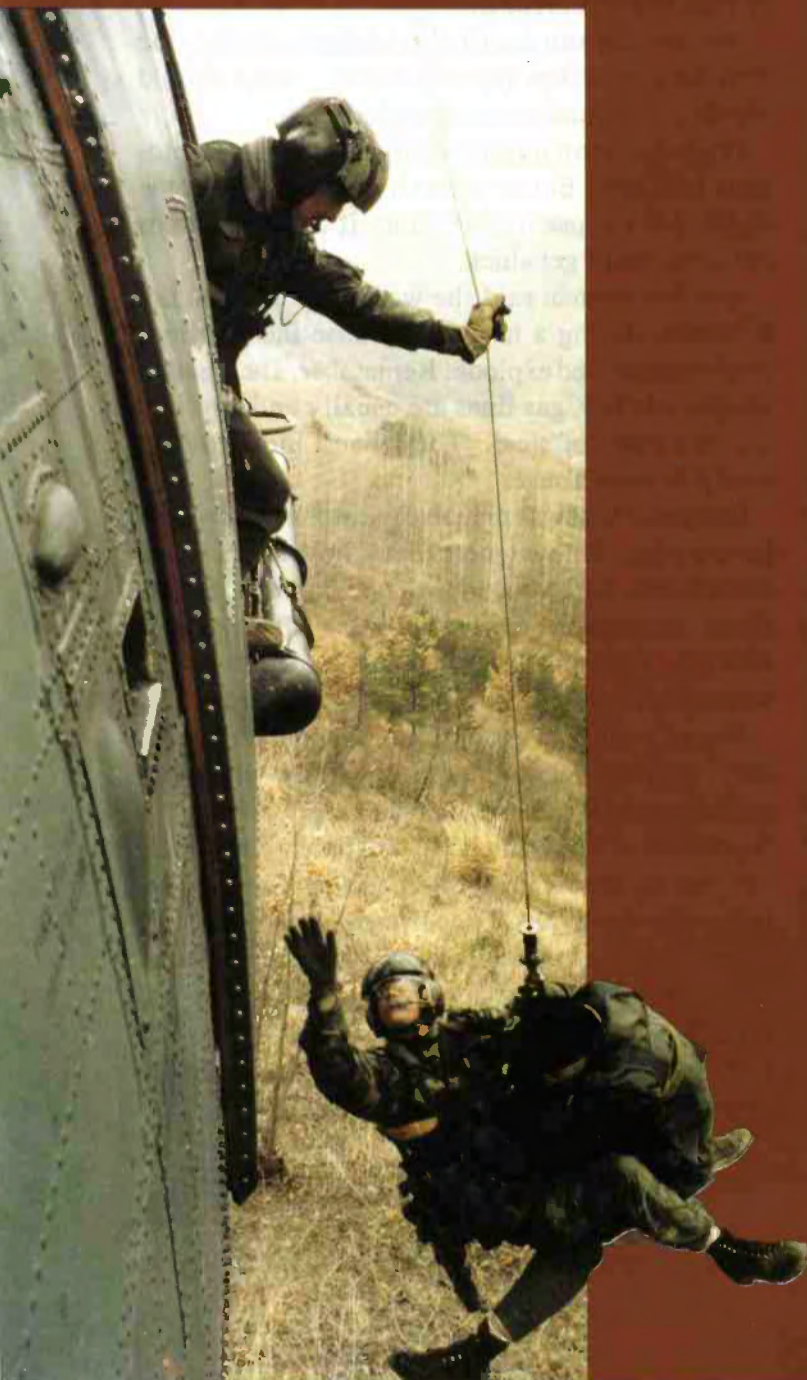
You are an Air Force Rescue customer who wants a safe, quick, and effective recovery. The success of your recovery depends on the extent of your preparation for assuming the survivor role. Success also depends on the composition and capability of the rescue forces available.

COMB

able
to conduct
your rescue mission.

Your preparation and rescue's capability interact through two-way feedback to improve customer satisfaction for both. Let's look at how you can prepare for the survivor role; at the composition and capabilities of Air Force rescue forces; and at how you can provide meaningful input to increase the safety and effectiveness of combat rescue operations.

As a crew member, you are a customer of the rescue force, and the rescue force is also your customer. Rescue



This pararescueman begins a rappel from a rescue helicopter to the jungle floor of Okinawa, Japan.
Photo by: Andy McCaskill

AT RESCUE

forces provide a customer service by rescuing you. You provide a customer service by properly planning for survival tasks. Your prior planning will enhance the probability of a safe survivor experience and effective rescue. Remember, you are in a survival situation because something went wrong. The better you prepare for your survival emergency, the safer and quicker you will be rescued. There are three important areas of preparation that you control: physical conditioning, accepting the probability of facing a survival situation, and developing a thorough emergency plan of action (EPA). You, as a dedicated crew member, maintain good physical conditioning and should certainly accept the survival role possibility. However, you may not allocate the time necessary to develop a good EPA.

Your EPA is your key to the door to safety. Your EPA is a prearranged contingency plan with your expected actions when forced to assume the role of evader or

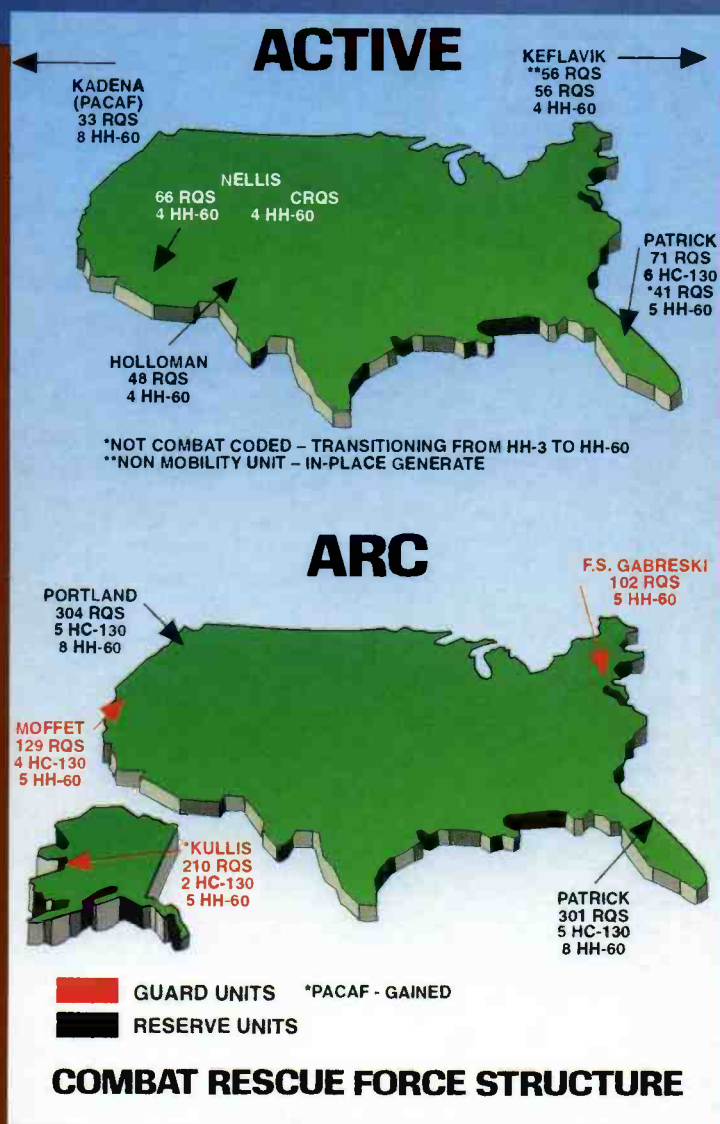
This pararescueman was deployed from a HC-130 using a MT-1X high glide ratio parachute during Rigging, Alternate Method Zodiac (RAMZ) open sea rescue operations over the Pacific Ocean.



survivor. During the early years of the Viet Nam war, crew members failed to appreciate the value of preparing an EPA. The recovery-to-shoot-down ratio, and interviews with those successfully recovered, pointed out that a good EPA increased the likelihood of successful evasion and ultimate recovery by rescue forces. Crew members recognized the value of EPAs by the middle years of that war and routinely developed quality EPAs.

Unfortunately, the EPA message did not survive well during the 16 years between wars. Desert Storm after action reports showed that in-theater emphasis and guidance on EPA preparation varied. Crew member EPA preparation ranged from good to nonexistent. This failure to thoroughly prepare EPAs created unnecessary difficulties for the rescue forces and either impeded or prevented recovery.

You have the ultimate responsibility to develop an accurate and workable EPA. The intelligence folks, the experts, will help you with EPA preparation. They will guide you through a checklist of actions that will provide the best opportunity for successful evasion or survival and recovery. This checklist covers crew identification, flight plan review, authentication procedures, short-term immediate actions, first aid, short-term and long-term evasion, communications with the rescue force, and recovery procedures. Keep the EPA fresh. Don't plan to fight our last war. Read the current intelligence reports. Know where the world's hot spots are and review the geography, climate, and culture of those areas. Tailor your survival equipment to meet the harsh-est probable environment. Review combat search and rescue concepts of operation. Know what rescue assets are available in your area of operation,



Top Photo: A HC-130 Hercules refueling a MH-60G Pave Hawk over the Atlantic Ocean.
Photo by: MSgt Ray C. Spears, Jr.

and understand the overall rescue force structure.

Air Combat Command, the lead command for conventional combat rescue, controls the tasking and mobility of ACC rescue forces. In addition to ACC, the Pacific Air Force, Air Force Reserve, and Air National Guard have combat rescue forces. The Reserve and Guard forces are ACC-gained upon activation. Figure 1 shows the composition of Air Force combat rescue forces. Primary rescue forces include fixed wing and rotary wing aircraft, and pararescuemen.

The HC-130 Hercules is an extended-range, combat search and rescue version of the C-130 transport aircraft. Its primary mission is to provide air refueling for rescue helicopters and to deploy pararescue teams and survival equipment to isolated survivors. The HC-130 performs extended searches over land or water in a permissive environment. The crews are capable of night low altitude operations using night vision goggles and can perform airborne mission commander duties when tactical conditions permit. The normal crew consists of nine: pilot, co-pilot, navigator, flight engineer, radio operator, loadmaster, and three pararescuemen.

The HH-60G Pave Hawk is an air refuelable helicopter used for combat rescue and recovery of survivors or evaders. Recoveries are made by landing or by alternate means such as rope ladder or hoist. A pararescue team can deploy from the helicopter over land or water to recover personnel who require assistance due to injury, adverse

terrain, or other limiting factors. Crews are capable of low altitude operations using night vision goggles. The helicopter has limited self-protection provided by M-60 machine guns. The normal crew consists of five: pilot, co-pilot, flight engineer, and two pararescuemen.

Pararescuemen are aircrew members responsible for the rescue, recovery, emergency medical treatment, and survival of distressed or injured personnel. Pararescuemen are certified emergency medical technicians trained in parachuting, survival, scuba, adverse terrain, and combat skills. Pararescuemen deploy from the HC-130 by static line or free-fall parachute. They deploy from the HH-60G by rescue hoist or alternate methods such as fast rope or rappel. Pararescuemen provide the survivor life-saving medical treatment and protection in combat and other difficult environments such as adverse terrain or extreme weather conditions.

These conventional rescue forces conduct rescue operations in two phases: the flight phase and the terminal phase. The flight phase involves flying from a safe area to a survivor location and back to a safe area after the recovery. The terminal phase includes all activities at the survivor location necessary to recover or take control of the survivor. The terminal phase may be as simple as landing a HH-60G helicopter to quickly recover an uninjured survivor. A more involved effort would have a pararescue team deploy from a HC-130 or HH-60G for longer duration care of a survivor. In this scenario, recovery may be delayed. By projecting yourself into the role of the

survivor, you can see that you must be familiar with both phases, with emphasis on what occurs during the terminal phase. The success and safety of the terminal phase may rest on the quality of your emergency plan of action and how well that plan interfaces with rescue operations.

Now, project yourself onto that rocky, snow-covered mountainside. Do you have a plan? Have you done everything you could to enhance your chances of survival and a safe recovery? You owe it to your husband, wife, father, mother, daughters, and sons to return home and fly and fight another day.

Air Combat Command created the Combat Rescue School to ensure combat rescue forces can interface with crew members. This avenue of communication provides the best opportunity for meeting the common objective of a successful survivor recovery. The Combat Rescue School, established under the USAF Weapons and Tactics Center and the 57th Wing, is the focal point of rescue expertise within the Combat Air Force. The school provides aircrew training through a weapons instructor course, tactics development, and testing for combat search and rescue. Crew members and others interested in improving combat rescue capabilities are encouraged to contact the school staff for information or to offer suggestions. The school is located at 6090 Holloman Ave, Nellis AFB NV 89191-6530; DSN: 682-4841; FAX: 682-3303; and commercial: (702) 652-4841. **These things we do that others may live! ■**

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