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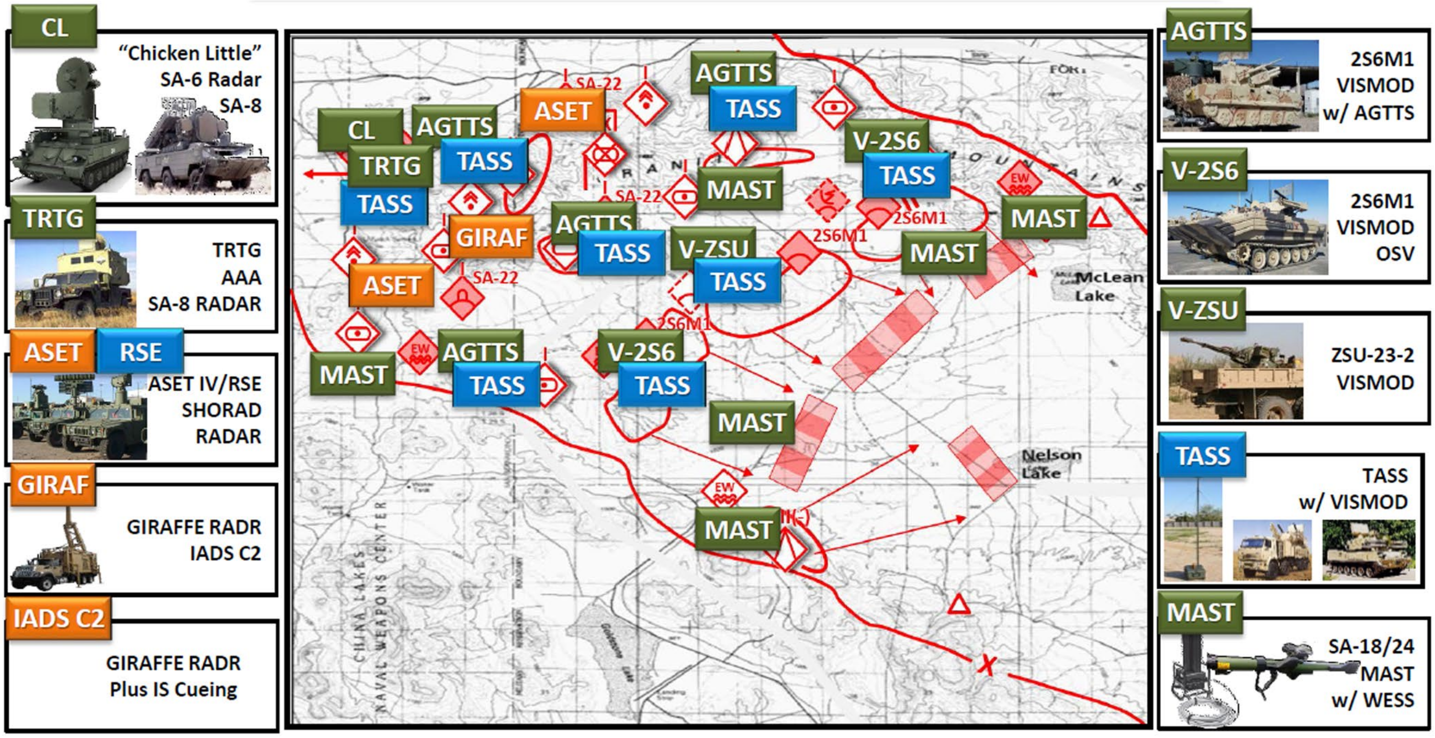
TACOPS Risk Mitigation

One of the first questions I ask new Army aviation tactical operations officers (TACOPS) students on training day one is, "How does your aviation mission survivability officer (AMSO) enable mission command?". Naturally, we don't expect a CW2 with 50 hours of pilot-in-command (PIC) time to recognize what mission command is on training day one, but it is our goal to, between the TACOPS course and aviation warrant officer advanced course (AWOAC),provide commanders, staff, and aircrew members the ability to make decisions with regards to aviation mission survivability (AMS) utilizing the mission command philosophy.

For instance, how does the AMSO enable the commander, staff, and aircrew to accept prudent risk? Through:

- Mission analysis (compare/contrast threats to Army aviation versus Army aviation capabilities and limitations).
- Use of terrain and route planning.
- Using knowledge of radar, laser, and infra-red (IR) theory to exploit enemy limitations.
- Use of fires planning air mission survivability (AMS).
- Techniques, tactics, and procedures that almost resemble ground survivability operations from ATP 3-37.34.

From my previous job as the AMSO observer/coach/trainer at the National Training Center, it has been my observations that AMSOs are getting better about integrating into company and battalion planning processes in order to train for the peer/near-peer fight. However, aircrews overlook AMSO integration into the risk management process. This is commonly observed by evaluating how the Army aviation risk assessment worksheet is completed by the aircrew. The S2 may have a section to address the risk level to Army aviators, but AMSOs input providing knowledge on tactical risk mitigation techniques and assistance in the mission briefing process is lacking. A product of our TACOPS course training is students are required to provide



a unit-level pilot's brief focused on threats to aviation, utilizing current intelligence summaries as part of the mission briefing and risk assessment for aircrews.

How do we train AMS to the future AMSO and help the commander minimize risk? Since taking the position as the TACOPS course director seven months ago, it has been my drive to produce skilled, technically and tactically, aviation TACOPS warrant officers. As such, the TACOPS course is making considerable changes to incorporate tactics to train student TACOPS officers how to fight through a threat. This is not without its consequences, as we scaled back on personnel recovery (PR) training, such as providing the Central Command (CENTCOM) high risk of isolation (HRI) briefer training , to increase training on TACOPS procedures to fight through threats. PR will be unavoidable in combat actions against peer/near-peer threats, and requires extensive resources to execute and adds risk in order to recover aircrews; but PR missions could be minimized or avoided if we train our aircrews to fight through a threat to support the ground maneuver forces.

Regarding tactics, the TACOPS course has incorporated more emphasis on home station training, specifically to train future AMSOs on how to incorporate AMS training and the AMS tables into the commander's aircrew training program. To assist us in this we have initially utilized the Aviation Combined Arms Tactical Trainer (AVCATT), increasing the previously programmed eight hours to almost 24, which is still not enough. Our intent to provide a method of instruction (MOI) to standardize the AMS tables, and get AMSOs to not just provide an AMS lane in a simulator, but integrate the AMS scenario into a peer/near-peer opposing forces (OPFOR) simulation that supports the unit's mission essential task list (METL).

The simulations training starts with training specific tactics against a myriad of radar, infrared, laser, and electro-optical threats. During our AMS Table 1 scenario, we train performance planning and aerodynamic considerations, pre-combat checks and inspections, threat identification via cockpit indications and actions on contact and defensive maneuvering.

During our AMS Table 2, we introduce the crew coordination element into the actions on contact, defensive maneuvering, and employment of countermeasures.

Our final table, AMS Table 3, becomes a two part event which we dubbed 3A and 3B. In AMS 3A, our students incorporate training from AMS Tables 1 and 2 in order to get the flight, generally a platoon size element ranging from four to six aircraft, to fight through the threat focusing on flight defensive maneuvering and brevity in accordance with ATP 1-02.1, Multi-service Tactics, Techniques, and Procedures for Multi-Service Brevity Codes (commonly called Joint Brevity).

Finally, AMS Table 3B pits TACOPS students against a peer/near-peer threat that is in-line with OPFOR doctrine; a warning order (WARNORD) is provided that the TACOPS students utilize to finish building the scenario through planning, and employing artillery and joint capabilities. Once the planning is complete, the students are shown how to input their plan into the AVCATT for mission execution. With AMS 3B, the TACOPS cadre perform a myriad of duties from red, blue, and white cells that provides coaching, training, and mentorship for the students.
We also include cyber-electromagnetic activities (CEMA) by degrading or denying the use of satellite navigation and communications.

As a final note, as the gunnery branch is the proponent for organic weapons systems employment and standardization, the TACOPS Course does not assess students on weapons engagements techniques, rather assesses the student on incorporating fires planning involving organic, inorganic, kinetic, and non-kinetic fires as part of the student's decision making.

Our way forward is requesting resourcing of additional simulator hours. These hours will provide the "frequency and repetition" necessary to train the tactics that build the commander's confidence in the AMSO's skill to train crews in support of the commander's training program as a force protection enabler. Further collaboration with the Directorate of Evaluation and Standards and the Aviation Resource Management System team will enhance and validate the AMSO skill set. I urge leaders who read this article to encourage your unit AMSOs to periodically monitor: the TACOPS Course Army Knowledge Online (AKO); AKO-S pages; and the TACOPS Group on milBook for information updates.

Risk is our business and I challenge our AMSOs in the field and at training centers to find innovative ways to integrate AMS training as part of the commander's aircrew training program. AMS training integrated with the commander's risk mitigation safety program will enable aviation units to execute their missions with reduced risk and to fight and win against emerging threats. ■

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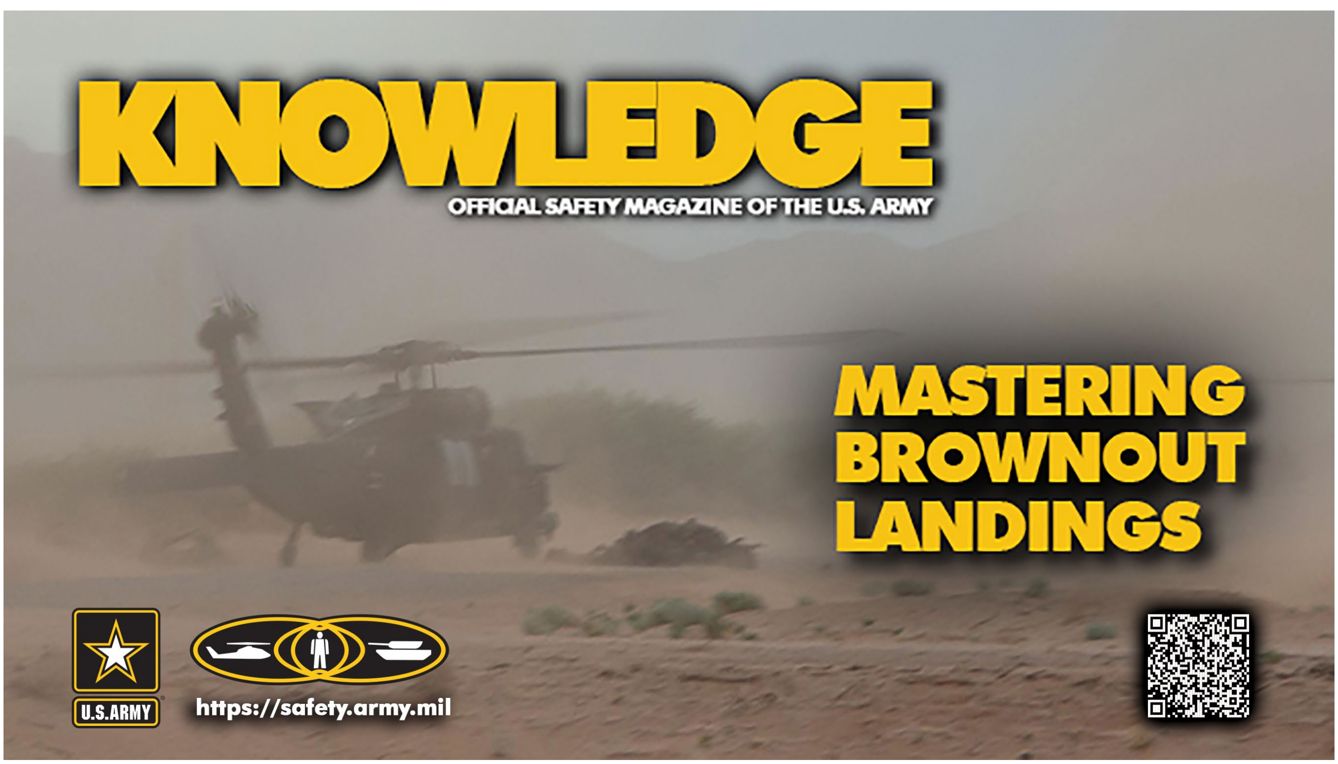


Flight Crew Leadership Part I

Leadership Philosophy

For those who are involved in the study of leadership, it proves difficult to believe that some people claim that leaders are born and not made. Although military academies, business schools, and executive training programs across the world all exist for the purpose of teaching leadership skills, some people still believe that strong leaders are merely the product of fortunate genetic inheritance and not the result of hard work by individuals who seek self- improvement.

In part, the misunderstanding may stem from the once popular belief that monarchies passed on the "royal blood" of leadership. For example, in 1869 Sir Francis Galton stated quite clearly that the traits of the most effective leaders were passed down through inheritance. In many cultures such a belief unfortunately persists.

In the 21st century, most educated members of society acknowledge that leadership skills can indeed be taught and honed through formal education and through one's personal commitment to self-improvement. A cursory glance at the business section of any bookstore shows seemingly countless self-help guides for improving one's leadership or management skills. Although leadership is inherently situational, generalizations can be made of desirable leadership actions, as will be shown later on in this reading. Such generalizations can be used to develop one's personal leadership style. Many capable leaders have produced personal mantras that embody their philosophy for leadership and recognize that leadership is both a science and an art.

Do Captains "Manage" or do they "Lead"?

Some claim that leadership is all about setting the example for others to follow. Some state that leadership consists of designing a system of incentives and disincentives for encouraging the behavior of followers. Others disagree vehemently, stating that such a view represents "management" and not " leadership." The debate between leadership and management is well documented. Society in general often treats both terms synonymously although scholars would disagree.

For our purposes, we can consider management to be the process of "planning, organizing, directing, and controlling" behavior so as to accomplish a given workload by dividing up tasks. Most managerial tasks to be completed by flight crews are carefully described in standard operating procedures (SOPs). Such a situation seems to diminish the necessary managerial actions of a captain but does not address the pressing need for leadership, which we shall see revolves primarily around the concept of creating a positive work atmosphere so the crew effectively manages resources and complies with procedures.

Such a distinction between management and leadership is quite interesting. The study of leadership was already well established around the time of Aristotle, yet management as the focus of study did not become common until the turn of the 20th century as a byproduct of the ongoing industrial revolution. At that time the purpose of managers was to create order, stability, and consistency in operations. Though, as previously mentioned, such a purpose can be served quite effectively through SOPs.

The distinction between management and leadership is brought to light when one considers why technology in the cockpit that deals with the control of flight trajectories, time, and fuel is called a Flight Management System (FMS) and not a Flight Leadership System! The purpose of aviation regulations, SOPs, FMS technology, and other flight guidance systems is to bring predictability and consistency to operations ("management"), whereas the actions coming from the captain set the tone for the efficient and safe use of the management tools ("leadership"). In such a context, some pilots have described leadership as being an external manifestation of a desired mental state or disposition…similar to what attitude is on the inside. So, **leadership is to the outside, what attitude is to the inside.**

Perhaps the best way to harmonize the differing opinions between "managing" and "leading" is to recognize that

captains must perform both managerial and leadership functions as part of their job. Such a dual-charge can be described as necessitating an ability to "direct and coordinate the activities of other team members, assess team performance, assign tasks, develop team knowledge, skills, and abilities, motivate team members, plan and organize, and establish a positive atmosphere.

Although some of the managerial items in such a description are already prescribed by SOPs, others need to be clarified through briefings and other guidance from the captain. The leadership elements of motivating and tone-setting are rarely, if ever, directly addressed in SOPs or regulations. On the rare occasion when a mention is made of such elements, **there is rarely an in-depth explanation of what specific actions can serve to motivate a crew and set an appropriate working atmosphere. Filling such a knowledge void is the purpose of this paper.**

Of course, there are dozens of models for leadership that have been developed. Some are best applied at the upper levels of organizations, such as leadership used by CEOs and chief pilots. Other models apply more to leaders of time-critical and fluid high-reliability settings, such as commanders of police sniper teams and firefighting chiefs. Other models deal with mostly mundane administrative settings, such as those faced by middle-managers at grocery stores and car dealerships. What guidance can we use to learn leadership for the highly structured and technically complex world of flight operations? Some available leadership models are extraordinarily complex, invoking terminology such as "uni- versus bi- dimensional dichotomies," "typologies," and "continuums" that can cause the average line pilot to laugh in bemusement or cry in frustration. Can we simplify the models and make them "actionable" by the average line captain?

Is Leadership a Science or an Art?

A very clear and fundamental depiction of leadership that most can agree with is the "Triangle Model. The three sides of the triangle are responsibility, authority, and accountability. The organization gives a captain responsibility for the safe and efficient conduct of a flight, the authority with which to make decisions, and the accountability for the outcome of the decisions. Sometimes such a model is described as a three-legged stool…take away any of the three legs and the stool will collapse.

For example, as we shall discuss, a captain can delegate authority to other crewmembers, but since it is the captain who is primarily held responsible for the safety and efficiency of a flight, the captain is ultimately accountable for any delegated tasks. Leadership is about how the captain sets the stage for the safe and efficient outcome of delegated tasks. **Leadership is about sparking each crewmember's internal desire for excellence in the tasks they perform.**

There is a vast range of perceptions of what actually comprises effective leadership. Napoleon supposedly linked all successes or failures to leadership. He is thought to have said, "There are no bad regiments, only bad colonels." In some extreme cases, effective leadership has been defined as instilling an instinctive and highly disciplined sense of obedience. The Roman Legion used "decimation" as a means to discourage cowardly and mutinous conduct in a unit. The term derives from Latin meaning "removal of a tenth." When a unit was decimated, one out of every ten soldiers would be killed by his peers in order to set an example that failure was owned by the unit and would not be tolerated. Decimation made such a psychological impact on military units and on society that the popular use of the word today means the destruction of a significant proportion of something, instead of a minor portion of something.

For a contemporary example of an effective leadership style that would prove highly ineffective in a cockpit, take the training motto of the French foreign Legion, which is simply, "Don't think!" Presumably, such a model is an attempt to instill an automatic sense of obedience among legionnaires who are taught to never question orders and to never contemplate consequences too deeply; simply to execute instructions they are given immediately and without hesitation. From a CRM perspective it does not take a genius to recognize that using the Legion's leadership philosophy in an aircraft cockpit would produce extremely hierarchical, disciplined, and structured crew behavior… just prior to each accident! Similarly, most aircraft SOPs do not provide captains with the authority to decimate crews due to lackluster performance.

Would Legionnaire leadership work in the cockpit? Maybe some principles, but not all!

Leadership is highly situational. In stark contrast to the model proffered by the French Foreign Legion stands the leadership musings of the Chinese philosopher Lao Tsu in the 6th century BC, who said, "A leader is best when we hardly know he exists. When his work is done, his aim fulfilled, his followers will say, we did this ourselves! How can such a philosophy of "invisible" leadership be used when flying an aircraft?

Nelson Mandela is lauded as a formidable leader of the human rights movement in South Africa. Perhaps due to the influence of Lao Tsu's philosophy, Mandela refers to leadership in his book, "A Long Walk to Freedom," by stating, "A leader is like a shepherd. He stays behind the flock, letting the most nimble go out ahead, whereupon the others follow, not realizing that all along they are being directed from behind. Such a philosophy of leadership apparently proved extremely effective for social change, but can it teach us lessons for leading a flight crew? Do Mandela's words contradict the style of strong and direct leadership traditionally associated with aircraft captains?

Professional experienced flight crews are technically competent adults who, for the most part, take some measure of pride in the successful outcome of a flight. A captain can use a series of subtle comments to nudge the behavior of flight crews towards a desired outcome.

The process is not unlike a professor who carefully structures the learning in a course through exercises, experiments, and simulations, causing students to believe that they have learned a great deal without the professor giving a single lecture. A student may look back at the end of a semester and say, "I learned so much in this course, but the professor didn't teach me anything!"

Similarly, a copilot may take great pride in dealing with a situation and even catching a captain's mistake, falling into the temptation of thinking that the captain has played no role in the situation and even thinking that the flight would have been better if the captain had stayed behind. All along, however, it was the captain's tone-setting in the cockpit that enabled the copilot to catch and report mistakes. It is important not to confuse silence for inactivity. A captain can use influence to affect the inner passion for excellence in subordinates and can do so in ways that would make Mandela and Lao Tsu quite proud.

Unfortunately, some captains do not recognize this concept and believe that leadership must be heard to be effective and therefore speak loudly and often. In so doing, they may actually be setting the exact opposite tone that they are trying to establish. After all, few crewmembers will be able to listen to their inner drive for excellence when all they hear are constant nit-picking comments from the captain.

A very different situation is

presented if a captain tries to foster excellence in a reluctant cabin crewmember or a disgruntled flight engineer. Sometimes the captain has to lead a crewmember who lacks an inner fire to excel. The captain may have to quickly switch tactics when dealing with different individuals. As we are starting to detect, the challenging nature of being an effective captain is that **leadership is both a science and an art.** There are volumes upon volumes of research detailing desirable leadership traits, decision-making styles, behaviors, and models to follow for guidance on how to effectively lead others. However, since leadership is inherently a human enterprise and each individual's personality is an extremely complex amalgam of motivations, strengths, weaknesses, experiences, and skills; implementing effective leadership actions requires not just knowledge, but flexibility and intuition.

In the past, famous war-time leaders have proven to be highly ineffective during times of peace, and vice versa. Similarly, different leadership is required in high-stress and high-consequence undertakings than what is required for running day-to-day operations at the corner grocery store, it is precisely the need for flexibility, intuition, and even an emotional intelligence that has caused some to erroneously believe that leaders are born and not made. ■

By Antonio Cortes

Tony has a bachelor's degree in physics from the University of North Carolina at Chapel Hill, a master's degree in aeronautical science from ERAU, and is a doctoral candidate in aviation management at Northcentral University. Tony has served in the U.S. Air Force flying Learjet 35A and C-141B aircraft. He has piloted the MD-88 as an airline pilot.

Mishap Review - AH-64 Wire Strike DVE Conditions

While transitioning between training areas, the AH-64D operating under night vision systems, contacted power lines. The aircraft crashed resulting in destruction of the aircraft and fatal injuries to the two crewmembers.

History of Flight.

As part of an APART flight evaluation, the accident aircrew took off at 1656L and completed one traffic pattern prior to departing their home station airfield. The aircrew flew to a maintenance test flight area where they conducted combat maneuvering flight. The aircrew then flew to the first training area planned where they conducted terrain flight maneuvers. As the aircrew conducted the evaluation the weather started deteriorating. The aircrew departed the first training area at 1818 en route to the subsequent training area. While transitioning to next training area, the aircraft impacted a large set of power lines (395 feet AGL) at 1821L followed by impact with the ground and a post-crash fire.

Crewmember Experience.

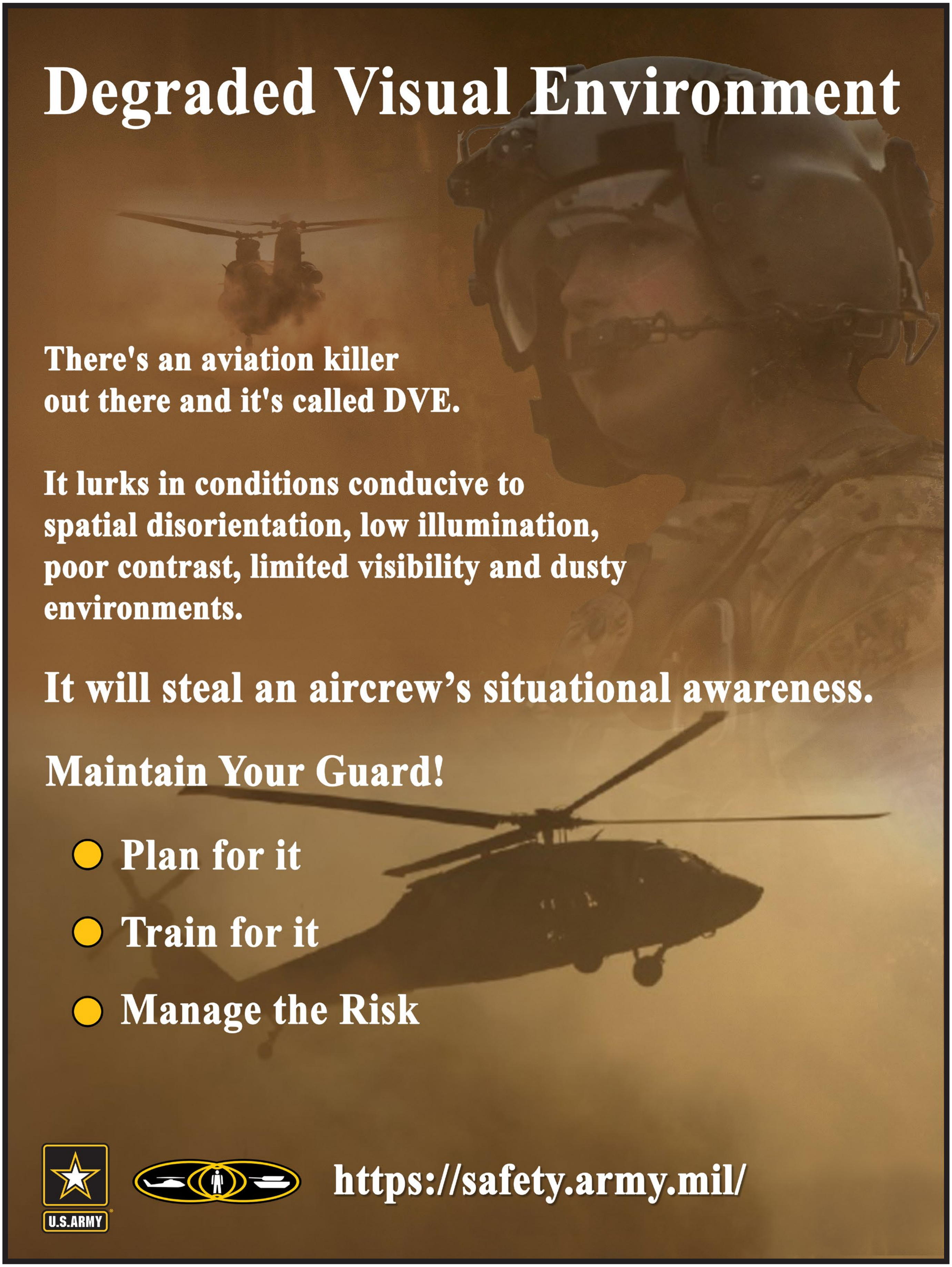
The pilot in command had 3,213 hours total time and 3,122 hours in series. The pilot had 1,816 total hours and 1,733 hours in series. Both of the crewmembers were instructor pilot qualified.

Commentary.

As crews perform training and operational missions, environmental conditions can become such that crewmembers must make decisions on whether to continue the mission or to abort and return to base. When you encounter deteriorating weather conditions, crews must take this into consideration and utilize their crew coordination training to assist in making decisions that impact their operational safety. To assist in making the best decisions the crews can also contact the briefing officer for further guidance or for re-briefing if changes occur which are outside of the scope the crew was briefed for. The ability to think on the move and conduct inflight dynamic mission planning based on new circumstances is an efficient way for crews to adjust as necessary to unplanned events or weather. When crews encounter unplanned circumstances, to ensure their safety, take positive crew coordination action, conduct dynamic mission planning, follow your unit SOP, and when needed, contact your briefer for guidance. ■

AR 95-1 assist commanders and aircrews in making decisions to continue or abort missions, paragraph 2-14. *b*. (3) states:

> **"(3) Step 3—final mission approval. Based on the resulting mitigated risk, the appropriate final approval authority reviews the mission validity, planning, risk mitigation, and authorizes the flight and/or operation in accordance with the commander's policy. Initialing, signing, or documenting oral approval on the DA Form 5484 and/or RAW are all acceptable methods of recording approval of the appropriate authority in the mission approval process. Briefing officers and final approval authorities may give oral approval if necessary. If a crewmember changes or a mission parameter changes which increases the resultant risk, the mission pilot-in-command or air mission commander will be re-briefed, and the mission will be reapproved as required."**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Class A - C Mishap Tables

	Manned Aircraft Class A – C Mishap Table									as of 10 Oct 17
	Month	FY 16					FY 17			
		Class A Mishaps	Class B Mishaps	Class C Mishaps	Fatalities		Class A Mishaps	Class B Mishaps	Class C Mishaps	Fatalities
1st Qtr	October	1	3	7	0		0	0	7	0
1st Qtr	November	2	1	2	6		1	0	4	0
1st Qtr	December	1	1	4	2		1	0	2	2
2nd Qtr	January	0	0	5	0		1	0	2	0
2nd Qtr	February	1	1	3	0		0	1	3	0
2nd Qtr	March	1	3	2	0		0	1	5	0
3rd Qtr	April	0	1	4	0		1	0	6	1
3rd Qtr	May	0	1	7	0		1	0	7	0
3rd Qtr	June	1	0	3	0		0	3	4	0
4th Qtr	July	0	0	9	0		0	2	6	0
4th Qtr	August	1	1	5	0		3	3	3	6
4th Qtr	September	1		3			1	1	7	1
	Total for Year	9	12	54	8	Year to Date	9	11	56	10
	Class A Flight Accident rate per 100,000 Flight Hours									
	5 Yr Avg: 1.27		3 Yr Avg: 1.32			FY 16: 0.87			Current FY: 0.99	

UAS Class A – C Mishap Table 17									as of 10 Oct 17
	FY 16					FY 17			
	Class A Mishaps	Class B Mishaps	Class C Mishaps	Total		Class A Mishaps	Class B Mishaps	Class C Mishaps	Total
MQ-1	12	1	2	15	W/GE	10	2	3	15
MQ-5	2		1	3	Hunter	5		1	6
RQ-7		4	24	28	Shadow		15	38	53
RQ-11			5	5	Raven			1	1
RQ-20					Puma				
YMQ-18									
SUAV					SUAV				
UAS	14	5	32	51	UAS	15	17	43	75
Aerostat	2	1		3	Aerostat	6		1	7
Total for Year	16	6	32	54	Year to Date	21	17	44	82

Blast From The Past: When in doubt, go around

*Articles from the archives of past **Flightfax** issues* **VOL 16, NO. 1, 23 SEP 1987**

The three-member crew was scheduled for 4 hours of night vision goggles (NVG) training in a UH-1H. In addition to the PIC, who was in the left seat, and the copilot, another aviator was occupying the crew chief's seat. This aviator would serve as a third set of eyes during the mission and would fly as copilot during the last half of the flight. There was no crew chief on the aircraft.

The helicopter took off at 2110 enroute to a training area where the NVG training would be conducted. All crewmembers were wearing AN/ AVS-6(V) NVGs. The first of the two copilots was flying the aircraft, conducting NOE flight maneuvers and confined area operations.

About 20 minutes into the flight, the UH-1 crew joined up with another UH-1 and proceeded to conduct loose-trail formation flight. This formation flight was planned and had been briefed. After approximately 20 minutes of formation flight, the two aircraft returned to the training area, and the second UH-1 left for the airfield to refuel, using the north route.

After practicing NVG confined area approaches for about 10 minutes, the mishap UH-1 crew also decided to return to the airfield to refuel and change copilots.

The PIC took the controls, and instead of entering the north route at the location designated by post regulations, he entered just to the west of the small arms ranges. This put the mishap UH-1 in front of the other aircraft that had departed earlier for the airfield. The pilot of that aircraft had contacted the airfield control tower and informed them that he

was on the route for landing.

The copilot of the mishap UH-1 was not aware that the PIC had made an abbreviated entry into the route, and he informed the airfield control tower of their entry into the south route. When he contacted the tower, his aircraft call sign was garbled, and when the tower operator responded with the wrong call sign, the copilot did not correct the call sign error. The PIC told the copilot that they were not in the south corridor and were already on downwind approach.

The copilot informed the tower they were in the north route, but once again he did not correct the error made by tower personnel in the aircraft call sign. The tower cleared them to land behind another UH1. The tower thought the UH-1 in front of the mishap aircraft was the one that had also been conducting trail formation flight and which had left the mishap UH-1 However because the mishap UH-1 had made an abbreviated entry into the route, the aircraft with which they had been conducting trail formation flight was actually now behind them.

While the UH-1 PIC's entry into the route at other than the designated location was not a direct or contributing cause of the subsequent accident, it did cause confusion among tower personnel regarding aircraft sequencing throughout the series of events that followed.

On the sod landing area short of the taxiway and runway on which the mishap aircraft had been cleared to land, a formation flight of two UH-60s, under NVGs, had just landed and were holding to allow another UH-60, which had just landed on another runway from an ILS approach, to hover-taxi off the runway and go into the refueling point.

The trail UH-60, which was holding on the sod, had its navigational lights on bright with theformation lights and anticollision lights turned off.

The PIC of the mishap aircraft was expediting his landing by making a midfield base leg turn from the downwind leg and he remained at traffic pattern altitude. He lined upon final approach to the sod area where the two UH-60s were waiting to use the runway and started the approach under NVG conditions. Because of the midfield base turn and no altitude loss on base leg, the U H-1 was in a very steep approach angle with a fast rate of closure.

The PIC of the mishap aircraft could see the lights of the trail UH-60 that was holding on the sod area and he was using these lights to make his approach. Because of the lights he could see illuminated on the UH-60, he thought the aircraft was an OH-58 with the anticollision lights turned off. He continued the approach with his attention fixed on the UH-60's lights. When the UH-1 was on short final to the lights that he was using for the approach the PIC realized that his rate of closure was too fast. Then realizing that his approach was terminating onto the Black Hawk the PIC of the UH-1 attempted to simultaneously bank right and slow down his aircraft As a result, his tail rotor struck the tail and main rotor system of the UH-60. The UH-1 crew heard a bang and felt the aircraft yaw to the right when tail rotor control was lost.

The UH-1 landed hard approximately 75 meters from the UH-60. The UH-60 crew heard the sound of impact and felt the aircraft shudder. The UH-60 rebounded into the air, sprang to the right and rolled onto its left side. The main rotor blades and tail cone struck the ground.

The aircraft continued to rotate, impacting once again on the right nose area, and coming to rest upright. There was nearly $90,000 damage to the UH-1H, and the Black Hawk was destroyed.

The UH-1 crew shut down their aircraft and got out to assist the crewmembers of the UH-60. The pilots of the UH-60 also shut down their engines and one pilot and the crew chief got out. The pilot from the UH-60 and the PIC from the UH-assisted the other pilot out of the UH-60. The crewmembers of the UH-1 were treated at a hospital and released.

The UH-60 crew remained in the hospital for observation after treatment for their injuries.

The PIC of the mishap UH-1 had 1,051 total rotary wing hours. with 939 hours in UH-1Hs. The aviator who was copilot of the UH-1 at the time of the mishap had 339 rotary wing hours, 289 in UH-1Hs. The PIC had flown 8 hours with NVGs in the previous 60 days; however his NVG currency had expired about 2 months before and had not been renewed at the time of the accident. He had satisfactorily completed his instrument renewal and standardization flight and had undergone an evaluation flight about 3 weeks before the accident occurred. He was well-liked and perceived by other unit personnel as an experienced professional aviator. There was nothing in his records showing any flight violations or previous direct accident involvement. ■

Mishap Briefs

Attack Helicopters

AH-64

D Model-Crew experienced un-commanded right roll of the aircraft during run-up resulting in class C damage. (Class C)

D Model-Aircraft executed a precautionary landing for a suspected #1 engine DECU failure. MDR download discovered engine #1 TGT over temp >949°C, single engine #2 overtorque >130% and main rotor overspeed >115%. (Class C)

Utility Helicopters

UH-60

A Model-Aircraft experienced a hard landing resulting in damage to the main & tail landing gear and several fairings. Inspection also showed indications of major structural damage. One Crew Chief reported back pain. (Class B)

L Model-Crew had been conducting environmental/ dust-landing training under NVGs, after which, post-flight inspection revealed stabilator damage, associated with presumed ground contact. (Class C)

Modified Helicopters

MH-6

Damage to the pilot seat structure, landing gear strut and skin were discovered during pre-flight. Flight records are being reviewed to determine how/when the damage occurred. (Class C)

Aircraft main rotor blades made contact with a building structure during infiltration training. (Class B)

Aircraft reportedly experienced "settling with power" while the crew was landing for INFIL training. Aircraft came to rest on its side sustaining damage to all M/R blades and separation of the tail boom. (Class A) ■

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