





The Thunderweasels

AKA
The Four Horsemen

Pages 6-9

**2010 Convention Redux**A Photographic Look Back at the 2010 Convention in Orlando

Pages 12-15

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#### **Association News**



**ON THE COVER:** The Four Horsemen were the world's only four-engine-per-aircraft demonstration team. Flying four C-130As in close formation, the team would perform a number of manuevers over a twenty-three minute airshow. By late 1959, sales of the C-130, both in the US and internationally, were starting to pick up. Lockheed capitalized on the popularity of The Four Horsemen by producing promotional items as sales tools. Today, a Lockheed-produced postcard featuring the cover photo, showing the aircraft in a diamond formation, occasionally turns up on online auction sites and usually sells for around \$30.

# A/TA, Camaraderie and Better Health

Camaraderie: mutual trust and friendship among people who spend time together; goodwill and easy rapport among colleagues; i.e. there is a genuine camaraderie on the air mobility team, and, they all enjoyed the camaraderie of military life.

The word "camaraderie" always seems to come up during conversations about the annual A/TA Convention & Symposium, (and I have always had an affinity for the word for some reason), so when I began going through the photos of the recent convention in Orlando for publication the idea of trying to convey the meaning and feeling of "camaraderie" came to mind.

It was easy! Essentially, I just had to use photos featuring folks having a good time (which as it turned out was virtually all of them). The result, "2010 Convention Redux," begins on page 12. It is my hope that words and ideas such as friendship, comradeship, fellowship, companionship, fraternity, conviviality, mutual support, team spirit, and esprit de corps will come to mind as you look through the photos. Some or all undoubtedly will.

When considering the word "camaraderie" the words "long-term health benefits" probably don't spring to mind, though according to recent research maybe they should!

The results of a study of U.S. Civil War veterans, released last year by UCLA, suggest that battlefield camaraderie yields long-term health related dividends for veterans.

Veterans who served in military units characterized by a strong esprit de corps were much less likely decades later to die of a stroke or heart condition than veterans from less cohesive companies, two UCLA economists have found.

"On the battlefield, you'd expect your buddy to have your back," said Dora Kosta, the study's lead author and a UCLA professor of economics. "But the fact that camaraderie provides a protective effect that endures long after the war has ended is a new and surprising finding."

"We're not sure how it works, but somehow, being armed with close social bonds in the extremely stressful situation of battlefield combat has a protective effect that continues long after the fighting has ended," said Matthew Kahn, the study's co-author and a fellow UCLA economics professor. "Men who went into battle with this emotional armor were much less likely in their late 50s and early 60s to fall victim to stress-related illnesses."

Veterans from companies lacking in cohesion were six times more likely than peers from cohesive companies to suffer from arteriosclerosis or to have heart attacks or strokes.

A little "camaraderie" anyone?

Collin R. Bakse, editor

# Chairman's COMMENTS



Gen Walter Kross USAF, Ret

I began the New Year with a resolution – that I would alter my writings here to you, the members, in an effort to provide you a better insight into the thinking and matters that your National Board addresses. I want to make A/TA more transparent because, as in most things, transparency generates better ideas. The goal is that A/TA remains pertinent to you as Air Mobility professionals.

Preparations are well underway for our next Convention & Symposium – Nashville 2011 – 3-6 November. We are still amazed at the success of our convening last Fall in Orlando. That success stands on the shoulders of our volunteers – hundreds of volunteers who are passionate, hard working, self-sacrificing, extremely talented, and with the highest of standards and a unique, total understanding our "customer" – *You*. We know also that to continuously improve we must pay attention to sharpening our processes

as we move ahead – so we've been doing just that for the past three months. I want to talk to you about one such area.

A/TA's Hall of Fame is the cornerstone of our ever-growing Awards & Recognition Program. Since standing up the Hall in 1989, we have made just 22 inductions. Most are individual entries – men and women who have defined Air Mobility over the past 100 years – twenty in all. Joining them are two teams, group awards, so compelling that they stand together to be honored for what they have done for our Nation. All the inductees are true heroes and role models who have left a legacy and/or have made long and enduring contributions to Air Mobility. They have carved out our history. They have created the capabilities we rely on today to practice our craft.

This past year, for the second time in 22 years, we chose not to induct a new entrant. Make no mistake. We indeed had worthy nominees. But we looked at those nominees about this time last year and saw a shifting pattern. It was a pattern that matched the unique and extra-ordinary nature of our membership. The A/TA has two differentiating aspects as an association.

First, our membership is over 40 percent Enlisted. Second, our membership presents itself at A/TA and to A/TA in team sets – from units of the Mobility Air Forces at one end of the spectrum to our basic fighting units – aircrews, medical teams, security teams, and other equivalent teams. Both aspects not only set us apart as an association, they define us as an association. Moreover, these two aspects are a direct reflection of just how the U.S. Air Force Total Force conducts its air mobility core mission everyday, everywhere.

The Hall of Fame nominees and the association demographics matched, but the National Board felt that the Hall of Fame nomination process and criteria did not adequately account for our two differentiating aspects. So we chose to pause, reflect, and review our Hall of Fame nomination process and criteria. We did two things process-wise.

First, we implemented new milestones (designed to give nominators more time to submit quality nominations – deadline is now April 1st each year). Second, we clarified and more specifically defined the elements of a nomination package (shorter, more targeted, and directly aligned with scoring criteria).

Regarding the selection criteria, our approach is to expand those criteria to account for contributions of our Enlisted Force and for the contributions of our air mobility teams. In recent years, we inducted two such teams – the Aeromedical Evacuation Legacy Team (2007) and the Air Refueling Pioneers (2009). The AR Pioneers are the first and only aircrew in our Hall of Fame – and yet, the aircrew (and its equivalent teams throughout Air Mobility) is the basic fighting unit of our core mission. So look for us to better account for these association aspects from now on – while retaining the existing criteria that has led selecting the iconic men and women who populate our Hall of Fame for their lasting contributions that have brought us to where we are today.

In early January, we forwarded letters to our Chapter Presidents seeking nominations. Traditionally, most of our nominations come from this channel. But remember, you as a member in good standing can nominate – using this process set.

Go here and take a look at your Hall of Fame Inductees, then click through and look at our refined nomination process: http://www.atalink.org/HallOfFame/Inductees.aspx

# President's MESSAGE



CMSgt Mike Reynolds USAF, Ret

Thanks to all participants for a wonderful 42nd Annual Convention/Symposium, which the A/TA hosted at the Marriott World Center in Orlando, FL. Thanks to our outgoing President, Mark Smith, I had the opportunity to observe from the sidelines and from that vantage point I saw a very successful event. The Marriott Staff provided superb support – *thanks*. BTW: don't forget to mark your calendar for the 43rd Annual Convention/Symposium in Nashville, TN, 3-6 Nov 2011. We look forward to seeing you again at the Gaylord Opryland Hotel in Nashville, Tennessee, this year.

I would like to extend a special thanks to General Norty Schwartz, Chief of Staff, and his lovely wife Suzie, Chief Roy, Chief Master Sgt of The Air Force, and General Duncan McNabb, TRANS-COM Commander, and his lovely wife Linda, for their attendance at the 42 Annual Convention & Symposium. We are very fortunate

to have such great supporters.

By way of introduction I am Mike Reynolds. I spent ~30 years in the USAF and most of that time I served as a loadmaster on C-141, C-130, MC-130 and EC-130 aircraft. For my last six years I had the honor and privilege to serve as the AFSOC Command Chief serving Generals Jim Hobson, Charlie Holland and Clay Bailey.

It is an honor and privilege to serve as your President and I look forward to working with the entire A/TA membership and especially with General Kross and the board. I am stepping into a position that Mark Smith has nurtured and matured like he would his own child. Mark has certainly made my job easier thanks to his dedication and loyalty to the Airlift/ Tanker Association. We owe Mark our deepest gratitude for all he accomplished during his tenure as our President. It goes without saying that we hope to have Mark's continued involvement with the A/TA. I am sure Mark will tell you that he would not have been as successful if it were not for those that served before him. I agree, and plan to call on Chiefs Bill Cannon, Dave Pelletier and Mark Smith often. Also, I have had some great mentors over the years, and two who have mentored me in more ways than I could share in this article are General Baginski (The Bagger) and General Bob Patterson. I know that both are available to assist me 24/7 as I begin my tour as your President. I realize that Mark Smith's man behind the scene is Collin Bakse, so Collin can certainly expect to hear from me often.

As the New Year begins so does the nomination submission process for the A/TA Hall of Fame. We have slightly modified procedures this year, so make sure and access the A/TA website to obtain the latest information for submitting a nomination. I would like to personally thank our Past President, Mark Smith, and Board of Advisors Member, Mike Kerver, for their work at putting together the new procedures, which will certainly standardize and streamline the entire process.

I would be remiss if I did not thank my Boss, Mr. John L. Zoltak, President and Chief Executive Officer of Support Systems Associates, Inc., for supporting me and my position as the President of A/TA. Mr. Zoltak and the Zoltak family are and have always been huge supporters of mobility operations and our entire military force. Without support and backing from Mr. Zoltak, I would not be able to function as needed to support A/TA. *Thanks Boss and all of SSAI for your support!* 

A/TA is a great organization, but it is only as good as the membership, so I ask each of you to continue to be our "cut man" in the corner that keeps us going into the next round. Let's increase our membership, our industrial base, and most importantly let's increase our support for airlift and tanker operations and the great Airmen that executes these vital missions.

I ask each of you to remember the dedication and sacrifices of our Soldiers, Sailors, Airmen, Marines and Coast Guardsmen; each and everyone are GREAT Americans. They are distinguishing themselves daily through service to their fellow Americans.

Best wishes to all for a safe and prosperous 2011. God Bless.

#### Load Clear!

#### Secretary's Notes

**Wow!** What an exciting Convention & Symposium we had in November. The highlights of the event are too numerous to mention all of them, but some deserve special attention.

The CRUD matches were not only excit-

ing, but also memorable, as Lockheed Martin Aeronautics provided video support and our new sponsor, Million Air, Inc., provided each referee, distinguished guests and the winning team with



Col. Dan Penny USAF, Ret

a set of custom CRUD balls. Million Air CEO Chris Freeman vowed to continue his company's support of the CRUD tournament.

AMC's Leadership team was entered "just for show." This team asked for no quarter, and gave none, as it fought its way into the double elimination round. This year it was obvious that McConnell AFB came to play and as the dust cleared from the first night's elimination rounds, McConnell boasted four teams in the final night's double elimination round. Altus, MacDill, and Travis joined AMC and the McConnell Four in the championship double-elimination round with Travis AFB taking first place; McConnell White taking second place and MacDill AFB taking third place.

A special thanks to Col Mike Cassidy, who led a crew of four highly qualified referees: "High-speed" Mastrioni, "Omar" Bradley, "Goon" Gohn, and Pete "Birch" Direnow.

Our Chapter Presidents' meeting is also worth noting as some 30 chapter representatives attended and provided feedback and ideas to our Senior Vice President. We also discussed where the Board of Officers would meet in 2011. With concurrence from the Tony Janus Chapter, the Board will meet at MacDill AFB, 18-19 February 2011. Other Board meetings are being coordinated and the dates will be released when coordination is completed.

Last but not least were our seminars, which were another hit. Lt Col Jeff Bigelow had his fingers on the pulse of Airlifters and Tankers throughout the system when he and his team selected this year's seminars; our hats off to another great selection of timely and interesting topics.

CMSgt (Retired) Jim Wilton, in cooperation with Col (Retired) Paul McVickar's produced a DVD titled, "This is the A/TA." A copy was available for each

continues >>>



#### **Pacific Northwest Chapter**

#### Past A/TA President and Pacific **Northwest Chapter Member** Featured on Military Website

The following article appeared on Northwest Military.com in mid-January 2011 –

#### Veteran Helped Roll Out C-17 Former Loadmaster's Long Career **Gave Insight During Testing Phase** By Tyler Hemstreet on January 13, 2011

When Bill Cannon enlisted in the Air Force in 1952 as an 18-year-old in the midst of the Korean War, he had no idea where his career might lead him.

The Providence, R.I. native knew only one thing for sure at the time - he wanted no part of being drafted into the Army.

After enlisting, when a commanding officer was looking for volunteers to participate in a boom operator program on the B-29 Superfortress, Cannon got word the job had to do with flying and his arm shot up. Although the boom program he was selected for was eventually eliminated, it pitched Cannon into a military and civilian career that opened doors for the Gig Harbor resident to become part of some important Air Force milestones.

After working his way through the ranks as a loadmaster on the C-124 Globemaster II, C-54 Skymaster, C-130 Hercules and C-141 Starlifter in the early 1980s, while still on active duty, Cannon was chosen to be part of a source selection board to help choose a new aircraft design for the Air Force's newest cargo transporter.

"We would go through all these (yet to be built) airplanes and evaluate them," said Cannon, who's now 76. "It was our job to pick out the best (design)."

The team eventually settled on the then McDonnell Douglas C-17 Globemaster III.

"It was the best one ... it had all the right features," Cannon said.

After logging a 30-year military career, which included more than 16,600 hours of flight, Cannon retired as a chief master sergeant out of McChord in 1982.

Upon retiring, he immediately realized how much he missed being in the airplane business. So Cannon called McDonnell Douglas and inquired about a job on the C-17 development program in Long Beach, Calif. The retired chief got the job, and stayed on after Boeing bought McDonnell Douglas and worked evaluating the five C-17 test models at the Long Beach facility and nearby Edwards Air Force Base.

Crews put the test airplanes through the ringer, analyzing each and every reaction and situation. One day during a session of assault takeoffs and landings, all the tires on the main landing gear blew out on impact while Cannon was riding in the cargo bay.

"It was a scary job at times, but we had good crews and good pilots on the project - they were all the cream of the crop," Cannon said.

Cannon stayed with the project for nearly five years, staying on until the testing phase of the C-17 was completed in the mid 1990s.

"Everything turned out the way we wanted it," the retired chief said. "There's not an airplane around like (the C-17)." Cannon has also found a way to make an impact in the loadmaster community, founding the Professional Loadmaster Association, or PLA, in 1997. The PLA is a nonprofit organization dedicated to bringing the loadmaster community together.The Northwest chapter has about 150 members and there are more than 2,000 members across 14 chapters spanning the globe.

"When I started it, I was the only member," said Cannon, also a past president of the Airlift/Tanker Association. "We now have members all over the world."

### Secretary's Notes continued from page 3

chapter representative. The DVD is an excellent video and briefing for your recruiting efforts. If your chapter did not receive its copy please contact me or CMSgt Wilton.

Let the Association know what

your chapter is doing! Send Chapter News to: atq@atalink.org

While we are in a short "lull," please review your membership currency and ensure that mail addresses are current. An easy way to do this is to check the label on your copy of the Airlift/Tanker Quarterly for your membership expiration date. Renew today and while you're at it, send us any updates to your contact information. If you don't have your copy of our magazine, go to the website (www.atalink.org), click on the login tab and view your status as well as the contact information we have for you. If you have changes we would appreciate the update. This keeps the number of returned renewal notices to a minimum, and your update ensures you continue to receive the award-winning Airlift/Tanker Quarterly.

We look forward to seeing you at the Board meetings. Serving You is Our Top Priority!

# **MARK YOUR CALENDARS!**

2011 A/TA Convention Symposium

3-6 November

**Gaylord Opryland Hotel** Nashville, Tennessee

Expect registration to open in late Spring

### Dyess Air Force Base, Texas, To Celebrate 50 Years of C-130 Presense at Big Country Airfest on 30 April

Dyess Air Force Base will celebrate the 50th Anniversary of C-130 presence there on 28-30 April in conjunction with The Dyess Big Country Airfest April 30 at the Abilene Regional Airport. Events will highlight the relationship Dyess and the local community have shared, as well as 50 years of flying Hercs over Big Country skies. An anniversary banquet will be held April 28 at the Abilene Civic Center celebrating the past, present and future of C-130s here. The Big Country Airfest will include B-1, C-130 and C-47 demos, as well as experimental aircraft, old cars and food. Log on to www.dyess.af.mil for updates regarding the airfest.



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The A/TA Enlisted Education Grant Program is designed to help A/TA enlisted members achieve their educational goals. Recipients are free to use their \$400 Enlisted Education Grant money for tuition, books, transportation, etc...

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#### EEG CRITERIA:

- ★ Current Membership in the Airlift/Tanker Association
  - ★ Enlisted Member in Grades of E-1 through E-9
    - ★ Commander's Recommendation
- $\star$  Assigned in an air mobility operational and/or support function (an augmentee on a mobility or maintenance support team, for example), OR, anyone directly or indirectly supporting the USAF Airlift or Air Refueling mission.
- ★ Must be a current member of Airlift/Tanker Association during the course which you are using to apply for the grant.
- ★ Checks will be issued upon completion of a course with proof of a grade of C or better in an accredited degree program
  - $\star$  Application must be postmarked within three (3) months of course completion.
    - ★ Individuals are limited to one ETG per 12-month period.
      - ★ Student financial need is not a criterion
    - ★ May not be used for a lower or lateral previously awarded degree

Additional details and forms are available online at www.atalink.org

If you meet the criteria, apply today! The A/TA wants to help you continue your education, so you, too, can soar like an eagle.



Working to Improve America's Air Moblity Force.

# Cover STORY

**F**or their first official show, the team called themselves *the Thunderweasels*, combining the name of the US Air Force Tactical Air Command's premier fighter demonstration team, the Thunderbirds, with the nickname of the 774th TCS, the Green Weasels. The Thunderweasels name raised more than a few official eyebrows, though. Sparked by their performance at that first show at Ardmore AFB, Oklahoma, the idea of a C-130 demonstration team began to build. Eventually, the pilots began seriously working up what evolved into a twenty-three minute show – and coming up with a new name. The team settled on *The Four Horsemen* after the four Horsemen of the Apocalypse. They performed public demonstrations at military air bases throughout the world in the 1950s, demonstrating the tremendous manueverability of the new tactical transport they flew. Their performances were so impressive that they often stole the show from other teams, particularly the Air Force's own Thunderbirds...



TROOD GARRI

Prior to the advent of the C-130, military transports had a reputation for being slow and sluggish. The reciprocating engine powered airplanes from which the first C-130 crews came were just that, and the transition into the Jet Age brought the crews into a new realm where they not only had a powerful airplane capable of speeds in the fighter range, its hydraulically boosted flight controls allowed manuevers that were previously thought impossible in a transport. The crews of the 463rd Troop Carrier Wing at Ardmore AFB, Oklahoma talked among themselves about how manuever-

able the airplane was, and what possibilities it afforded. At the time, TAC C-130s were a common sight at Campbell Army Air Field, where the 101st Airborne Division was stationed. One day the scheduled airdrops were cancelled because of high winds on the drop zone, but four crews from the 774th Troop Carrier Squadron decided to use their training time for some intricate formation flying.

That's correct, the idea for the Thunderweasels AKA The Four Horsemen, the world's only four-engineper-aircraft flight demonstration team, sprang from four pilots looking to log formation flying time.

The C-130A Hercules first entered US Air Force operational service at Ardmore AFB, Oklahoma, in December 1956. "In early 1957, four of us were at Fort Campbell, Kentucky, for a week to drop Army paratroopers," recalls Jim Akin, one of the Horsemen. "One of the scheduled drops was cancelled because of high winds. So, we said, 'Let's go fly formation.' We needed to log formation time and flight hours."

The four pilots - Akin, Gil Sanders, Jim Fairbanks, and Gene Chaney - were all Air Force captains, aircraft commanders, and qualified instructor pilots. Assigned to the 774th Troop Carrier Squadron, the first operational C-130A unit, each of them had logged roughly fifty flight hours in the brandnew Hercules.

They started in loose formation in the airspace over Kentucky and Tennessee but gradually brought their aircraft closer and closer together. "We discovered we really liked flying formation," recalls Akin. The foursome made a couple of low passes in close formation over Fort Campbell before landing.

A second cancelled paratroop drop later that week led to a second formation flight. The idea for a C-130 demonstration team had been planted. It would take more than a year to come to fruition.

#### The Horsemen Mount Up

Returning home to Ardmore, Chaney and Akin, along with several other pilots, would practice formation maneuvers on training missions or when they were deployed.

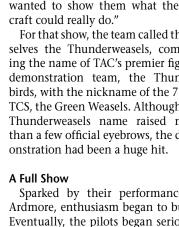
"A group of us liked to fly formation, and we would go out and try maneuvers to see if they worked and we could do them safely," notes Bill Hatfield, one of the copilots on the first flight, and who would eventually become the team's regular slot pilot.

At that time, Tactical Air Command, the forerunner of today's Air Combat Command, operated the Air Force's fighters – and the C-130 fleet. In early 1958, the nascent team seized an opportunity for its first demonstration. The parent unit of the 774th TCS, the 463rd Troop Carrier Wing, was tasked to put up all thirty-six of its assigned C-130s for a mass flyby at a ceremony at Ardmore. Most of TAC leadership would be in attendance.

"We asked our wing commander if we could do something special at the end of the flyby," Akin recalls. "As we flew past, the four of us broke out, came back in a diamond formation, scorched over the field at about 300 knots at low altitude, and closed with

> a bomb-burst maneuver," said Akin. "The crowd was expecting the Hercules to come lumbering by. But we wanted to show them what the aircraft could really do."

For that show, the team called themselves the Thunderweasels, combining the name of TAC's premier fighter demonstration team, the Thunderbirds, with the nickname of the 774th TCS, the Green Weasels. Although the Thunderweasels name raised more than a few official eyebrows, the demonstration had been a huge hit.



Sparked by their performance at Ardmore, enthusiasm began to build. Eventually, the pilots began seriously working up what evolved into a twenty-three minute show - and coming up with a new name. "We thought long and hard about it and finally settled on the Four Horsemen after the four Horsemen of the Apocalypse. There were four of us," notes Akin. "The name fit."

By late 1958, the team was ready for its first official show, which came at Sewart AFB, Tennessee, the team's new home. Ardmore AFB was closing, and the 774th had been reassigned to the base near Nashville.

The permanent Horsemen – Akin, Hatfield, Chaney, and Capt. David Moore - flew with a rotating cast of squadron copilots who were all aircraft commanders and instructor or pilots. standardization/evaluation

For demos, the pilots also flew with a flight engineer and a scanner, normally an aircraft mechanic. "The enlisted crew members would just about get into fist fights trying to fly with us," remembers copilot Bill Mills. "Their pride in what we were doing was top to bottom."

To start the demonstration, the pilots, wearing scarves and a distinctive shoulder patch featuring the silhouette of a horse head with the Roman numeral IV in its neck, taxied out and lined up on the runway in a diamond formation.

Normally, Moore, whom Mills described as "a very smooth pilot," flew lead. Akin flew right wing, which the Horsemen called the number two position. Hatfield flew the slot, or number four position. Chaney, the team leader who had been the ferry pilot when the first operational C-130 was delivered from the then-Lockheed Georgia Company facility in Marietta, Georgia, flew the left wing, or number three position. "The left wing was the hardest position to fly," said Hatfield. "The pilot had to look across the flight deck and out the right window the whole show to stay in position."



The Four Horsemen were the world's only four-engine-peraircraft demonstration team. Flying four C-130As in close formation, the team would perform a number of manuevers over a twenty-three minute airshow. The Horsemen were (from left) team lead Capt. Gene Chaney, Capt. Bill Hatfield, Capt. James Akin, and Capt. David Moore. They flew with a rotating cast of squadron copilots who were all aircraft commanders and instructor or standardization/ evaluation pilots. For demos, the pilots also flew with a flight engineer and a scanner, normally an aircraft mechanic. (U.S. Air Force Photo).

The Four Horsemen would take off nearly simultaneously in about 1,500 feet. The slot aircraft, which was getting extra lift from the leader's propwash, actually got airborne first, followed by the other three aircraft. Quickly retracting the landing gear, the four pilots would be in tight formation at 1,500 feet altitude over the end of the runway, climbing at 4,000 feet per minute.

Next, the team made a left banking turn, repositioned, and flew in a close line astern, slightly stacked trail formation down the show line. That arrow formation was followed by the arrowhead formation, where lead and number two remained in trail formation, while the number three aircraft moved to the left wing of number two, and the slot moved off two's right wing. After repositioning, the group made a flyby in the diamond formation. The four pilots then transitioned to an echelon right formation to turn.

Coming back toward the crowd at approximately 200 feet above the runway in the diamond, the team performed the bomb burst – what they called the Horse-

men Burst – with the lead pilot pulling up and making a forty-five degree left climbing turn, while the right wing pulled up and made a ninety-degree right climbing turn. Left wing pulled up and turned ninety degrees to the left, while the slot climbed and made a forty-five degree turn to the right. After completing their turns, the pilots leveled off and returned to the original heading.

The team rejoined in the diamond, and then went to an extended trail formation. With sufficient spacing between the C-130s, the four pilots simultaneously broke to the left for landing. The Horsemen then touched down on alternate

sides of the runway.

#### The Famous Horsemen

Crowds everywhere were astonished. "The C-130A had a wingspan of 132 feet and weighed more than 100,000 pounds. But it could move," notes John Dale, a Horsemen copilot. "It was very responsive, even flying past thirty degrees of bank. We were able to do the

maneuvers because of that aircraft. It was the closest thing to a fighter I ever flew."

But the wow factor was something the team had to work at. "We had to schedule two- to four-hour flights a couple of times a month to train for the maneuvers," notes Akin. "We were working in Four Horsemen practice between operational missions and deployments. Anytime the four of us were somewhere, though, we flew a show. We didn't have dedicated aircraft, so we flew whatever C-130 was available. We performed from Bangor to Bangkok."

Hatfield adds, "We didn't fly standard formations, so we had to practice. Our show required a lot of concentration." The two wingmen flew with barely ten feet of horizontal separation between their wingtips and the horizontal tail of the lead and at the same altitude. Hatfield, in the slot position, flew seven to ten feet behind and slightly above the lead. "I had to fly on the lead and react to

him. We weren't that far apart. But we never had a close call, and we never even scratched an aircraft."

As the team's notoriety spread, airshow requests started coming in, including a surprisingly large number of requests from Strategic Air Command bomber bases. At that time, a fairly intense rivalry existed between the Air Force major commands that flew

bombers and fighters. Many

SAC base commanders simply

preferred to see four-engine "heavies" flying a demon-

stration versus single-engine

fighters. The C-130 did make

for a different kind of air-

show. At one demo, lead had

to shut down an engine. The

Horsemen continued on as if

By late 1959, sales of the

C-130, both in the US and in-

ternationally, were starting to

pick up. Lockheed capitalized

on the popularity of the Four

Horsemen by producing pro-

motional items as sales tools.

Today, a Lockheed postcard

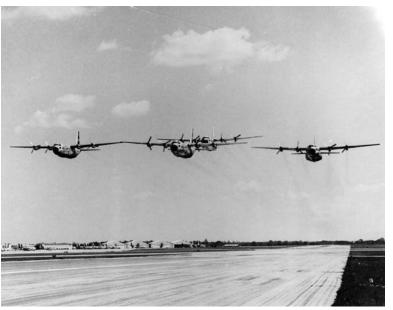
showing the Horsemen in

formation [cover photo] oc-

casionally turns up on online

auction sites and usually sells

nothing had happened.



The Four Horsemen show was performed at an altitude of 500 to 1,000 feet. This photo shows the Four Horsemen in the diamond formation. (U.S. Air Force Photo).

Lockheed also made a documentary called *Hercules And The Four Horsemen*. Thousands of feet of footage were shot of the team flying their demonstration over the Grand Canyon and near Williams AFB outside Phoenix, Arizona. The result was a movie the Horsemen really disliked.

The movie producers used actors, including one with a harsh nasal voice, to spout ridiculous dialog, rather than use the crisp, precise radio calls the Horsemen actually made. That was irritating, but what was particularly galling to the team was that most of the footage was shot at an altitude of 10,000 feet so the aircraft

would appear against the clouds.

for around \$30.

"We flew at 500 to 1,000 feet during our shows," notes Akin. "We never flew for shows as high as we did for that movie." Despite its faults, the fifteenminute film is the only official visual record of the Four Horsemen in action.

"We didn't fly standard formations, so we had to practice. Our show required a lot of concentration...we weren't that far apart. But we never had a close call, and we never even scratched an aircraft."

-Lt. Col. Bill Hatfield, USAF Ret.

#### Into The Sunset

The pinnacle of Horsemen history came when the team appeared on the

18 January 1960 cover of *Aviation Week and Space Technology* magazine, regarded as the world's premier aviation publication. Ironically, shortly after that, the team was disbanded.

A number of factors led to the demise of the Horsemen. Some issues were political: For instance, when Chaney was asked if he would like to fly a dedicated C-130 as a support aircraft for the Thunderbirds, he said no. Separately, Congress, following Senator William Proxmire's lead, refused to allocate money for additional flying hours to practice because the team was seen as frivolous.

Other factors were operational: The Horsemen were all overdue to rotate to other assignments. "The C-130 was heavily tasked for operations at that point," recalls Akin. "Even though preliminary plans had been made for the team to have five permanently assigned C-130s, the aircraft was just too valuable to dedicate to a demonstration team. Those plans were quickly killed."

The main reason for the end of the Horsemen, though, was the advent of the C-130B. By spring 1960, the Hercules squadrons at Sewart were rapidly converting to the B-model.

"The B-model Hercules had a number of features that made it better for long missions," notes Hatfield. "It had different engines and propellers, and much lower hydraulic pressure on the controls.



Retired Four Horsemen members (from left) Lt. Col. Bill Hatfield, Col. Billie Mills, Col. John Dale and Lt. Col. James Akin, visited the base 26 March 2010 as part of the 815th Airlift Squadron reunion. The crew members took a flight in a C-130 simulator and 'flew' together for the first time in over 50 years. The Four Horsemen are a C-130 demonstration team founded in 1957. (U.S. Air Force photo by Senior Airman Steele C. G. Britton)

It was not as responsive as the C-130A and just not as good for formation flying. We tried to use the B-model for the Four Horsemen, but it simply didn't fly like the A-model."

Once the Four Horsemen rode no more, the aircrew members went their separate ways. Chaney and Moore have both passed away. Akin, who flew B-24s and P-38s during World War II before reentering the Air Force, retired after a twenty-eight year service career. Hatfield, who first served as an enlisted cryptographer, spent most of his twenty-eight year career in C-130s. He was also part of the initial cadre of Air Force pilots to fly the C-141 StarLifter.

Among the Horsemen copilots, Mills, who had been an enlisted radio operator in the Berlin Airlift, went on to serve as the commander of the first C-130 squadron equipped with the All-Weather Aerial Delivery System during his thirty-six year

Air Force career. John Dale was in charge of DC-130 drone director operations during Operation Linebacker in Vietnam. He also commanded a U-2 squadron and was later director of reconnaissance at 15th Air Force headquarters during his thirty-two year career.

From the first practice to the last show, the Four Horsemen flew fifteen official airshows and additional demos when the four pilots

were deployed. But the effect the team had was lasting. "What we did was prove to the rest of the Air Force, and, more importantly, to the Army, what the C-130 was capable of doing. That was shown during the Vietnam War," notes Akin. "And the C-130 is still showing that capability today."

# The Four Horsemen Fly Again, Kinda

Last spring marked the 50th anniversary of the Four Horsemen's finale, but even the memory of the team has not faded – they remained a part of the 463rd Airlift Group's heritage, and part of the C-130 heritage shared at Little Rock Air Force Base.

Members of the Four Horsemen, Mr. Akin and Mr. Hatfield, two of the original crew members, along with retired Col. John Dale and retired Col. Billie Mills visited

Four Horsemen pioneer, retired Lt. Col. Bill Hatfield, signs the book "Herk: Hero of the Skies" for Master Sgt. Scotty Packard, a 189th Airlift Wing instructor, during a visit to Little Rock AFB, Arkansas in March 2010. Sergeant Packard was given the book by his father and shared it with Four Horsemen members to see photos of them taken over 50 years ago. (U.S. Air Force photo by Senior Airman Steele C. G. Britton)

Little Rock on 26 March 2010 as part of the reunion of the 815th Airlift Squadron, the "Flying Jennies." Arrangements were made to get them time on the C-130J simulators and so in a small way, for the first time in 50 years, the Four Horsemen flew again.



#### **New and Historic Hercules**

By Jack O'Banion - Lockheed Martin HC-130J Program Director

The C-130 Hercules reached another historic milestone with the first flight of the HC-130J Personnel Recovery Aircraft last summer in Marietta, Georgia.

The U.S. has several versions of legacy HC-130s and the Coast Guard has its own HC-130J in operation. Yet, this latest variant of the Super Hercules is distinctly different from its peers: It is the first J-model variant for the U.S. Air Force that will be used to provide personnel recovery support for joint service operations with coalition forces and civilian agencies.

Maj. Gen. Thomas K. Andersen, director of requirements, at Air Combat Command (ACC) head-

quarters at Langley Air Force Base, Va. accepted delivery of the HC-130J during a rollout ceremony held at the end of the production line in April. At the ceremony, Anderson explained why the HC-130J is so critical to the U.S. Air Force representatives, U.S. government officials, Lockheed Martin employees and supplier partners in attendance.

"Personnel recovery is one of the Air Force's core missions and vital to what we do in defense of America. The mission is demanding and we are grateful to those [employees] of Lockheed Martin assembled here that have given us a world-class aircraft ready for the demands of the mission," Anderson told us.

"The HC-130J will enable us to meet the expanding operational tasks that we face today wartime operations in Operation Enduring Freedom and the Horn of Africa, and relief operations in the continental United States as well as in areas like Haiti and Chile. For that, ACC, the Air Force and the nation thank you," Andersen said.

All the attendees got to see the HC-130J up close after the ceremony and were uniformly awed at the unveiling of the new aircraft. The aircraft was parked outside our Marietta production line and joined by a legacy HC-130P, an HH-60G Pave Hawk rescue helicopter, a team of Pararescue Jumpers and HC-130 crews from Moody Air Force Base, Ga., which eventually will receive HC-130Js.

We are on contract now with the Air Force to build 21 HC/MC-130J Super Hercules to recapitalize its aging fixed-wing rescue HC-130s and special mission MC-130s. The Air Force approved a recapitalization requirement of 74 aircraft (37 for ACC and 37 for Air Force Special Operations Command). The U.S. Air Force first began using the HC-130s for personnel recovery and special missions in the early 1960s.

With the HC-103J, we see the C-130 setting new standards for mission flexibility. This new configuration of the proven C-130J will give ACC unparalleled capability for combat search and rescue. As demand for the C-130J continues to grow around the world, we will see more ways this aircraft can meet the demands of any operator and mission.

The new aircraft, which is based on the operational U.S. Marine Corps KC-130J tanker baseline, incorporates a host of new features including:

- Advanced multispectral sensors
- Expanded avionics, including enhanced displays and dual military Satellite Communications (SATCOM)

- Modernized refueling system, providing low/high-speed aerial refueling/rapid ground refueling
- Fully functional combat system operator crew station on the

flight deck

- Universal Aerial Refueling Receptacle Slipway Installation (boom refueling receptacle) for virtually unlimited range/endurance
- Large Aircraft Infrared Counter Measures (LAIRCM) provisions
- 60/90 kVa generators and enhanced electrical system
- Enhanced Cargo Handling System greatly reducing reconfiguration times/excellent airdrop accuracy
- Enhanced service life center-wing These enhancements combine to

create a well-defined growth path providing this aircraft even greater combat capability.

It is interesting to note that this new variant of the C-130J was not built on a special production line. Rather, it was built in-line with the other C-130Js, a process that reduced cost, risk and enabled the team to meet contractual guidelines. For example, the Universal Aerial Refueling Receptacle has been included in a few C-130Js, but never as a part of initial production. Usually, this feature has been a post-production modification.

To include this feature in existing production, the C-130J team created new tooling to support the receptacle during its production phase at Clarksburg, W.Va. In addition, enhancements for new avionics and fuel tubes to support this feature were added to the C-130J line at our subassembly plant in Meridian, Miss., and in Marietta.

These were some of the most significant structural changes on this aircraft in decades. We did it without a glitch and without having to add positions to the line.

We proved to the Air Force that we can make the changes to the aircraft without impacting delivery time. The span between initial production and final delivery went quickly.

I could not be more proud of what our C-130J team has accomplished with the HC/MC-130J. Just 22 months after contract award, our team produced this aircraft completely within the production line with no post production modifications required. Not only that, we accomplished this while doubling our C-130J production rate.

The aircraft's floor arrived in Marietta from Meridian in October 2009, and a commemorative floor signing event was held on the final assembly line to honor the new aircraft. A little over 10 months later, the completed HC-130J flew.

This locks in savings for our customers in both recurring cost and schedule. By incorporating the HC/MC-130J's unique systems during production, verses retrofitting them post-production, the Air Force is saving roughly \$8 million and eight months on every HC/MC-130J we build. That saves more than half-abillion dollars over the 78 aircraft baseline program.

Two HC-130Js are now off the line, there are others to come. In fact, the second HC-130J had the distinction of being the 200th C-130J built.

After U.S. Air Force Operational Test and Evaluation, we will deliver the first HC-130J to Davis-Monthan Air Force Base in Arizona in 2012.



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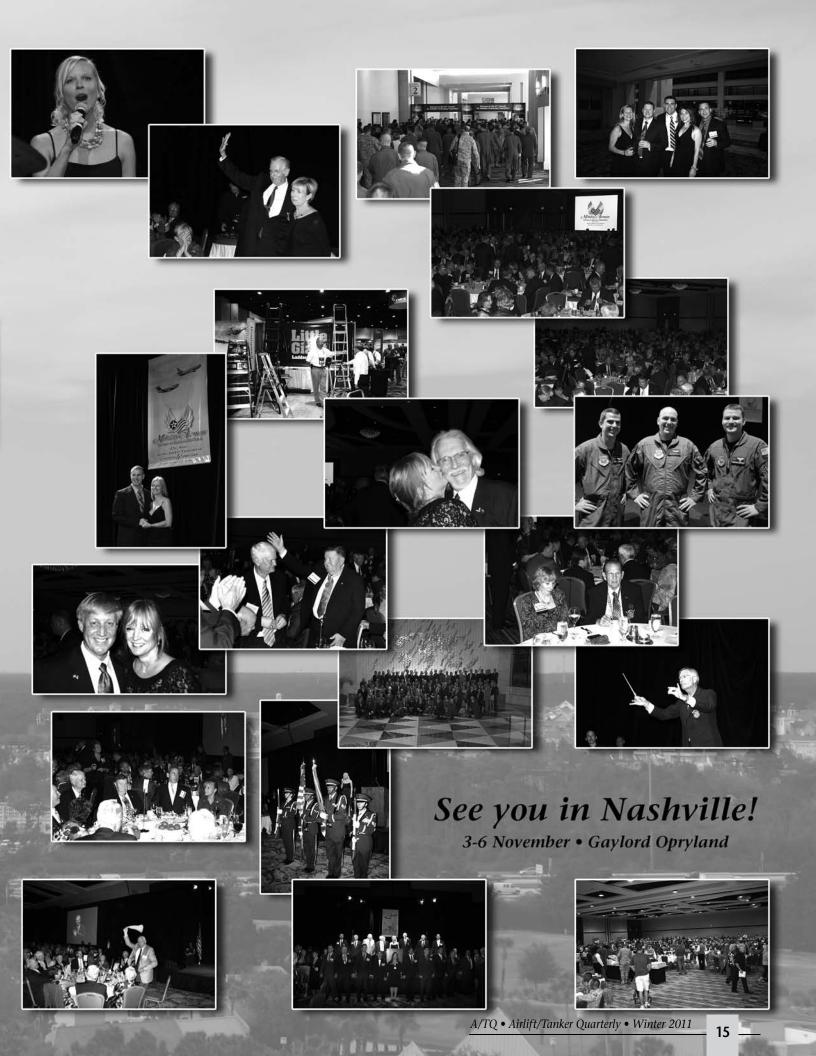












# NEWS & VIEWS

### USTRANSCOM Commander Visits Naval Station Rota

By Mass Communication Specialist 1st Class (SW) Paul Cage, Naval Station Rota, Spain Public Affairs Office

Commander, U. S. Transportation Command, Air Force Gen. Duncan J. McNabb, met service members and toured the facilities at Naval Station Rota, Spain, on 19 November 2010.

While at the naval station, McNabb held an all hands call with sailors and airmen of the 725th Air Mobility Squadron and thanked them for the support they provide to USTRANSCOM.

USTRANSCOM works through its service components Air Force Air Mobility Command, Navy Military Sealift Command and Army Military Surface Deployment and Distribution Command to provide military and commercial transportation, terminal management, aerial refueling and patient movement across the range of military and humanitarian operations around the world.

"You guys have no idea of the power of Rota," said McNabb. "Even though it is happening at other locations now, Rota is the crown jewel. When people talk about intermodal operations, Rota is always the example after the great operations you have done here."

NAVSTA Rota is strategically located near the Strait of Gibraltar and is the halfway point between the United States and Southwest Asia. It is the proverbial "eye of the needle" where the warfighters supplies come through.

"Rota is the key to our success, and I cannot tell you how much I appreciate what you guys do here," said McNabb. "It is for all the operations you do that has set the example of a way of doing things that has changed the game."

Following the all hands call, McNabb went to the port facility to tour Military Sealift Command Maritime Prepositioning Ship USNS PFC Eugene A. Obregon (T-AK 3006).

Obregon is operated by the Waterman Steamship Corp. Its mission, as part of Maritime Prepositioning Squadron 1, is to forward-stage Marine Corps equipment.

NAVSTA Rota is the only base in the Navy Region that has a port and airfield within one fence line and conduct operations 24 hours a day.

"Rota is one of those pivotal parts of the network that allows General Petraeus and General Austin to not have to worry about the logistics," said McNabb.



Commander, U.S. Transportation Command, Duncan J. McNabb shares his appreciation with Naval Station Rota Sailors and Airmen from the 725th Air Mobility Squadron for their service during an all hands call at the base theater on 19 November 2010. McNabb traveled to Rota to survey transportation elements on base. (U.S. Navy photo by Mass Communications Specialist (SW) Kara Moore/ Released)

"It is the logistics superiority our country has that no other country has; strateability to move and sustain forces worldwide. It is truly one of our greatest asymmetric advantage and you help make that true."

N A V S T A Rota Commanding Of-

ficer, Capt. Bill Mosk, was extremely grateful McNabb talked to the sailors and airmen serving at NAVSTA Rota.

"The general did an amazing job taking high-level strategic concepts and communicating them to our total workforce," said Mosk. "It was very motivational and inspirational. Everybody who heard the general's speech walked out with their heads a little higher and were extremely proud of their accomplishments here at Rota."

#### A LITTLE BACKGROUND



**Location:** Naval Station Rota, Spain is located 6 hours (1 hour by air) south of Madrid, and 1.5 from Seville. Andalucia, the country's southernmost self-governing region, which boasts 500 miles of beaches ("playas"), crystal blue seas, and rolling countrysides rich in sunflowers, olive trees and flourishing vineyards is home to NS Rota. Known as the "Florida of Europe," Andalucia and its Costa del Sol, or "Coast of Sun," attract northern vacationers who come not only for the beaches and mild weather, but for flamenco dancing, bullfights and festivals. The economy of Spain is the fifth largest in Europe, accounting for about nine percent of European Union output. Yet, per capita income is among the lowest in the European Union, which translates to a low, yet comfortable, cost of living.

**Mission:** Service to the Sixth Fleet and the US Air Force Air Mobility Command Unit is the primary mission of Rota. This port is one of the busiest in the Mediterranean. Naval Station, Rota, and its tenant commands help keep fuel oil, ammunition, and spare parts flowing to the operating forces.

**Population Served:** Naval Station Rota and its tenant commands employ about 3,000 Americans, including military, civilians (300), and

their families, within a 25-mile area. There is a large influx of U.S. military retirees in the area. Rota, a town of 28,000 nearest to the naval base, is one of many small, whitewashed villages ("pueblos blancos") on the Atlantic coast of Spain. In the summer, Rota's population swells to about 100,000 with vacationing Europeans.



**History:** In September 1953, after almost two years of surveys, negotiations and planning, the governments of the United States and Spain signed economic aid and defense agreements. Construction of the naval base at Rota had already begun under the technical supervision of the Navy's Bureau of Yards and Docks. Known as the Gateway to the Mediterranean, Naval Station Rota is strategically located near the Straits of Gibraltar, halfway between the United States and Southwest Asia. The 6,000-acre, Spanish-owned installation provides vital support to both the U.S. Sixth Fleet and to the U.S. Air Force Mobility Command units transiting into or through the theater.

# How USTRANSCOM's "Crown Jewel" at Naval Station Rota and Joint Intermodal Operations Are Changing the Game in Afghanistan

By Capt Tom Alford, 725th Air Mobility Squadron

This past fall, the USTRANSCOM Commander, General Duncan McNabb, stopped in Naval Station Rota and held a base wide commander's call to thank the base population for the intermodal cargo movements that have been happening since 2006. He used

the term "Crown Jewel" to describe how intermodal operations have changed the game in Iraq and Afghanistan. General McNabb went on to say "Rota is one of those pivotal parts of the network that allows General Petraeus and General Austin to not have to worry about logistics." The men and women of

"You guys have no idea of the power of Rota. Even though it is happening at other locations now, Rota is the crown jewel. When people talk about intermodal operations, Rota is always the example after the great operations you have done here."

-General Ducan McNabb
Commander USTRANSCOM

Naval Station Rota are always happy to hear about a job well done, but it begs the question, how does transferring cargo from a ship to an aircraft translate to a game-changing advantage in Afghanistan? More importantly, how awesome does an operation have to be for the USTRANSCOM Commander to call it a "Crown Jewel?"

#### Rota: Gateway To The Fight!

In simplest terms an intermodal, or sometimes called a multimodal operation, takes high value cargo from a sea port in the United States, moves it to another sea port near a large airfield where the cargo is transloaded onto strategic airlift platforms and flown the rest of the way into theater. Intermodal ops at Rota start on the United States' East Coast where cargo such as mine resistant ambush protected vehicles or helicopters is loaded onto ships belonging to the Military Sealift Command.

From there, it sails east across the Atlantic Ocean for about two weeks. Once the ship docks at Naval Station Rota, the cargo is unloaded and moved about 1.5 miles to a storage area on the aircraft parking ramp. Helicopters are towed in a small parade ten at a time by yellow tractors, while other cargo is moved by trucks and rolling stock is usually driven. Rota is at a slight disadvantage in terms of strategic sealift because there is very little lay down space that one might expect to see at a larger port. Cargo is instead stored on the aircraft parking ramp, which forces air field ops to sacrifice some aircraft parking space, but on the other hand secures the cargo and keeps it further away from corrosive effects of the sea.

Next, the cargo is loaded onto a previously staged aircraft from a CONUS base, and flown into Kandahar where it is quickly downloaded and put into use. The aircraft is then refueled, serviced and loaded with redeploying cargo while the air crew goes into crew rest. The next day, the aircraft and crew fly back to Rota where the cargo is downloaded and the cycle repeats. Operations continue nonstop until all of a deploying unit's cargo is moved into theater and the returning unit is redeployed.

The largest intermodal operation at Rota to date happened over 35 days in November and December of 2009, when 18 aircraft deployed 91 helicopters for the 82nd Combat Aviation Brigade (CAB), while redeploying 83 helicopters from the 101st CAB on 90 sorties using 17 flight crews accumulating 1005 flight hours!

#### Yeah, But What Is The Cost?

Rota, Spain is an excellent strategic location for an intermodal operation because it is one of the few places in the world with a sea port and a large airfield behind the fence of a single military

installation, and it represents a perfect balance of cost versus time. Considering a ship's economy of scale, it would cost much less to sail cargo from CONUS to the port of Karachi in Pakistan, rather than to Rota and airlift it the remaining distance, but it would take

several more weeks.

On the other hand, cargo could be flown from one or several CONUS airfields directly into Afghanistan much more quickly than it could be moved by ship, but at a significantly increased cost. A cost benefit analysis of airlift versus sealift is a subject for another article.

More simply, the amount of money saved depends on a variety of factors like what types of aircraft are used and how far the cargo is carried by air versus by sea.

As an example, in 2006 USTRANSCOM moved 37 Apache helicopters and 107 airlift containers through Rota while saving the Department of Defense \$1.3 Million. As an added benefit, transloading cargo at Rota cut the helicopter's transport time and allowed the Army to maximize pre-deployment helicopter pilot training.

In July 2009, an intermodal operation saved \$64 Million by sending the 5th Stryker Brigade to Kandahar from Fort Lewis, WA through the island of Diego Garcia. Finally, according to local estimates by logistics specialists and USTRANSCOM's 2010 En Route Infrastructure Master Plan, intermodal operations at Rota have typically saved approximately \$10 Million per operation.

#### How Will the C-5M Change Things?

Long story short: the C-5M is much more reliable because of its upgraded engines and glass flight deck which translates to fewer delays and to faster moving cargo. In July 2010, two C-5M Super Galaxies were used during the most recent intermodal at Rota. With a total of 10 aircraft, the 725th Air Mobility Squadron, staged flight crews and Navy partners moved 102 helicopters and 400K lbs of cargo for the 4th CAB from to Afghanistan, and it had them in place two days earlier than scheduled. The impressive part however, is the two C-5M models flew 55% of the cargo on 22 of the 23 scheduled missions with a 96% maintenance departure reliability rate (not a misprint) versus the 82% for the C-5A and B models.

The C-5M will change the game further considering it is expected to raise the C-5 mission capable rate to 75% while saving \$17 Billion in fuel costs over the next 40 years. When asked about the C-5M's performance during the latest intermodal, Stage Manager Colonel Patrick Cloutier of the 439th Airlift Wing said "In short the C-5M did what it was designed to do: deliver cargo more effectively and efficiently than its predecessor".

Military commanders throughout history have discovered what the United States can now confirm in Afghanistan, that it couldn't be a more difficult theater in which to sustain forces. Its land locked, surrounded by the highest mountains in the world, has little developed infrastructure and has complex diplomatic relationships with its most of its neighbors. With these challenges in mind, intermodal operations through Naval Station Rota offer a timely way to get the most cargo from its place of origin into theater at the least cost...and that is how it changes the game as USTRANSCOM's "Crown Jewel."

# Let's Win-Win the Tanker War for America

by Colonel Greg Cook, USAF (Retired) - February 2011

#### Introduction

There is one war the United States can win today, but it will take strong and decisive national leadership to make it happen. A nearly decade-long odyssey to replace the Air Force's venerable KC-135 tanker with an aircraft designated "KC-X" has degenerated into a major political battle in Washington and an economic brawl between two global aerospace giants. This "Tanker War" has gone on long enough, and it is time for national leaders to stand up and end the KC-X debacle. Consider this - if we buy both tankers offered in the competition and double planned production, we can recapitalize the air refueling fleet decades sooner than planned, employ upwards of 100,000 Americans building airplanes, enhance trans-Atlantic trade relations - and do so for about the same or less money than we already expect to spend on the tanker force. MOST IMPORTANTLY, we will have a more reliable, flexible, and capable air refueling force that no longer relies on geriatric airplanes that will cost more to maintain than to simply replace. While this may sound simplistic and perhaps too good to be true, that is hardly the case. The only overly-simplistic argument about a dual or accelerated tanker buy is the unchallenged assumption and political rhetoric that it's "too costly." We have a historic opportunity in front of us that may never come again and it is being ignored. The arguments in favor of a dual, accelerated tanker buy are compelling and worth consideration by our national leadership.

#### History of the Tanker War

The KC-X competition is expected to produce a single winner-take-all contract to build 179 total aircraft at a rate of about 12 to 15 per year for 15 to 20 years beginning by fiscal year 2012. It begins a long-term effort to recapitalize the forces that provide the nation's air refueling capability, and the contract is projected to be worth \$30-50B over the life of the program. The first of three proposed contracts meant to replace the approximately 415 KC-135s and 59 KC-10s currently in service, decisions will be made later on whether to increase the number of aircraft purchased under this program or to acquire additional tanker aircraft through other programs. Contract award is imminent and expected within the next several weeks.

Naturally, the issue is extremely divisive given the large stakes at hand and the controversial history of the program. Boeing won and then lost a lease-purchase contract early in the last decade due to concerns about the acquisition process followed by USAF at that time. The European Aeronautic Defence and Space Company (EADS), then partnered with Northrup-Grumman, won the first competition to build the new tanker in 2008. It too was subsequently cancelled following Boeing's contest of the award and a General Accounting Office report that identified irregularities in USAF's acquisition process again. It now seems likely that any new decision will be challenged again by the losing company, which will only delay the acquisition of a new tanker that much further.

The competition has evolved into a bitter war of words that divides America and her allies, current and past military leaders, industry partners and members of Congress, many of whom are fighting to preserve or create jobs in their districts. Each company claims it will provide 48,000-50,000 American jobs across the country if awarded the contract.

Accusations of protectionism are already straining relations between the U.S. and its European allies where EADS is based, while Boeing supporters point out that government subsidies to EADS run counter to World Trade Organization fair trade rules. If Boeing

wins, there is the potential for backlash by European nations who may choose to not buy U.S. defense products in turn.

The bottom line is that a single, winner-take-all contract award is a lose-lose scenario for virtually all parties. It will strain trans-Atlantic trade relations, be fought bitterly in Congress, and does not solve the biggest problem at hand - that the Air Force still doesn't have a new tanker and that it will take decades to replace an air refueling fleet that already averages over 50 years of age and is extraordinarily costly to operate and maintain. The biggest casualty in this war is how the politics of money and jobs have overshadowed the military necessity of replacing these aircraft. Another tragedy is the additional future costs and risks we are inheriting for not doing so.

What if we could turn this tanker war into a win-win for all concerned? Is there a viable, cost-effective solution that would finally get new tankers into production without another contract award protest and further delay meeting this vital and already late-to-need military requirement? What if we could get this necessary military capability sooner and dramatically reduce the future cost and risk of operating geriatric airplanes that should have already been retired? What if we could virtually guarantee bi-partisan support in Congress, expand the U.S. aerospace industrial base, provides tens of thousands of American jobs, and avert an international trade war with our European partners?

The best answer is for the Department of Defense (DoD) to build and field both tankers simultaneously in a dual buy – not a split buy – from both aerospace companies and to produce them in at least twice the number per year than currently envisioned. This means awarding two contracts to build tankers, with each company delivering at least 12-15 aircraft annually for 10 years or more beginning in 2014. In the short term, the principle additional costs would be those required to start up two production lines. In the mid and long-term, dollars saved by accelerating the retirement of the legacy tanker fleet would provide offsets to pay for higher rates of production. The potential benefits far outweigh the costs of not doing so.

#### Why Air Refueling Matters

Air refueling is one of the most vital, yet invisible and unsung capabilities in the U.S. military. It is a linchpin of U.S. power projection and a key element in virtually every aspect of American military operations. Since its inception, however, it has always been overshadowed by the bombers, fighters, transports and other aircraft it refuels and thus many times dismissed as just another supporting capability. Yet the U.S. military also realizes that that it cannot operate effectively today without a tanker force.

At its root, air refueling enables aircraft to operate without regard to distance, time, and access to the land and sky of other nations. Its necessity is driven first and foremost by the reality that the United States is a global power separated from a majority of the world by two large oceans and secondly, by the limited or questionable availability and access to the land bases of the world. Air refueling enables the speed, flexibility and endurance of a concept we know as airpower.

The ability to respond rapidly to any contingency or crisis, anywhere, at any time is a cornerstone of America's military might and power. Air refueling provides that capability, and is an essential component of virtually every military operation across the spectrum of conflict. It is not a secondary, supporting capability, but

a primary instrument of national power with strategic, global impact. Air refueling is more than an Air Force capability – it is truly a national asset that benefits all of the nation's combat forces, with tremendous application towards non-military activities as well. From routine peacetime operations to natural disaster response or humanitarian operations and the full range of contingency and combat operations, air refueling capability is critical to achieving our national security objectives at every level.

We also assume tremendous risk in continuing to rely almost solely on the KC-135 for our global air refueling needs given the unknowns in operating with such an old fleet. At any moment, the discovery of a major deficiency or a single catastrophic event could potentially ground the entire fleet and cripple the U.S. military's flight operations until a fix could be engineering and implemented. As Air Force Chief of Staff General Norton Schwartz has said in the event this happens, "Without tankers we're not global . . . our joint force would face immediate paralysis and long-term degradation."

Without air refueling, we could not deliver forces rapidly or non-stop to destinations worldwide, our intercontinental bombers could not reach far away targets, our fighters' ability to stay engaged would be severely constrained, and the persistence and endurance of many other airborne capabilities from reconnaissance to command and control would be limited. We could not adequately defend the homeland nor effectively prosecute a war in Afghanistan or many other places, and our ability to deter conflict would be greatly diminished. In short, America's national security is dependent upon a flying gas truck. It's called the KC-135, it's over 50 years old, and it needs to be replaced.

#### History of the KC-135 and the Recapitalization Plan

The original KC-135 aircraft design and fleet size evolved from Cold War requirements to implement and support the U.S. strategy of containment. A large fleet of tankers was needed to refuel bombers that would carry out strategic operations in the event of nuclear war with the former Soviet Union. A derivative of Boeing's 707 commercial airliner, a total of 732 KC-135 aircraft were built and procured at a rate of 75 to 100 per year during the late 1950s and early 1960s. In its Cold War role, the KC-135 spent about a third of its time on nuclear alert ready for takeoff, but in reality was flown very little. During the post-Cold War era, the aerial refueling aircraft mission expanded to support global operations of all types of aircraft even while the KC-135 fleet was reduced in size. Today there are 415 left in the Air Force inventory.

The current plan to transform the air refueling force projects that recapitalizing the capability inherent in the tanker fleet could take up to five decades to complete and likely cost tens of billions of dollars. The average age of the KC-135 fleet in 2011 is over 50 years; continued operation until 2045 would result in airplanes up to 90 years old. With this plan, about 236 of the Eisenhower-era aircraft might still be operational at that time. Operating military aircraft of this age is unprecedented in aviation history, and many questions remain unanswered about how long these aircraft can be operated safely and effectively.

During the recapitalization period, it is likely that aircraft technology and aerial refueling needs will also change significantly, as will U.S. national security imperatives, military strategies and operational concepts. Mission needs for USAF and DoD will likely change dramatically over the planned acquisition period. Just as conditions in the first decade of the 21st century are dramatically different than they were 50 years ago when the KC-135 was introduced, so too will conditions be far different 40 to 50 years from now.

The aircraft we purchase today must be adaptable to future operating environments. It is considered highly likely that the KC-X aircraft will be used as a platform to eventually replace a number of specialized mission large aircraft such as the E-3 AWACS, RC-135 Rivet Joint and E-8 Joint STARS, among others. All these aircraft are currently

highly modified versions of the original C/KC-135 platform.

The KC-X program will produce approximately 109 new planes by 2020, at an investment of roughly \$3.7B per year from Fiscal Year 2014 through 2020 en route to a full production run of 179 aircraft. The plan is to pursue follow-on production of a KC-Y and KC-Z fleet to replace the remaining KC-135s and the KC-10 fleet. Yet during this time, depot and maintenance costs to maintain the geriatric KC-135 fleet are expected to skyrocket.

#### Maintenance and Depot Cost Considerations for the KC-135 Fleet

Let's consider the cost and effort required to maintain and operate the 50-year old KC-135 fleet today and the projected costs of continuing to do so for another 30-plus years. The Oklahoma City Air Logistics Center at Tinker Air Force Base now does about three fourths of the Air Force's KC-135 maintenance. Each aircraft cycles through planned depot maintenance about every 5 years. On average, a KC-135 spends from 187 to 224 days down for depot maintenance at the center, although the depot's goal is to reduce the number of flow days from this level to an average of 130 days within a few years.

There is a huge price tag for doing so. The depot is spending about \$2 million more per plane by sending some work to a contractor, has brought in an additional 1400 new workers in the last two years, and spent \$80 million to renovate an old General Motors plant into a new tanker depot facility that consolidates repairs from several buildings into one. In the meantime, parts shortages and obsolescence issues are chronic. Since so many parts are no longer available or being produced, many have to be reverse-engineered or fabricated – a very slow and expensive process multiplied across a vast number of parts.

According to the Air Force, roughly 19 percent of the KC-135 fleet is in depot maintenance at any given time, which translates to roughly 78 aircraft out of service every day. The numbers of aircraft going through depot annually are also rising, with depot throughput increasing from a record-high 55 aircraft last year to 58 planned in 2011 and 64 in 2012. Another 15 to 20 aircraft also arrive at the depot each year for unplanned and unscheduled repairs.

The depot process itself has evolved into a virtual rebuilding of each aircraft. Over the years, the Air Force has replaced engines, avionics, hydraulics, and many other internal and structural components just to keep the fleet operationally effective. It's like taking a 1965 Chevy and replacing virtually everything inside it while retaining only the body and chassis of the original car versus simply buying a new car. In the end, the old Chevy still looks and performs much like the original with some improvements, but will never fully realize the capabilities and technologies available and integrated by design into a new production model. The Air Force is now confronted with the likelihood that the skin and other major structural components (the body) of the KC-135 fleet will also have to be replaced within a decade or so due to corrosion and metal fatigue.

Sustainment costs alone currently run about \$2 billion annually for the KC-135 fleet and are increasing exponentially. By 2018, the Air Force estimates that the cost to maintain the geriatric fleet will rise to \$6 billion annually - about 3 times the current cost. According to the Air Force, dealing with just corrosion and general aging will cost about \$18B and that does not take into account other unknown issues that are likely to arise with the aging KC-135.

Air Mobility Command also estimates that every year of delay in the KC-X program costs the command an additional \$55 million due to increased maintenance costs and additional time out of service for KC-135s.

#### Benefits of a Dual Accelerated Tanker Acquisition Strategy

We must stop this insane, but necessary waste of resources that is occurring because we cannot agree as a nation on a better plan to maintain our nation's vital air refueling capability. A dual accelerated tanker acquisition strategy will reduce the technical risks and costs of production in the long run, greatly enhance operational capabilities and synergies, and reduce the operational risks and future costs of maintaining and operating a geriatric tanker force. Retiring this old force will likely free up monies necessary to pay for this new acquisition strategy.

Reducing Technical Risks and Costs of Production. Since neither tanker is currently being built in the United States, a simultaneous dual buy offsets differing technical and production risks inherent in both programs. While both companies have delivered tankers based on these aircraft to the Air Forces of other nations, there are technical and production challenges each must face to meet the American tanker requirement. Boeing must integrate new technologies such as the 787 digital cockpit into its proposed tanker, for example, and EADS must build a new production facility on American soil to live up to its promises.

A dual buy would also force each company to meet production and cost timelines in the early phases of development and testing, and push overall costs down in the long run due to competition in the marketplace. As the programs prove themselves, whichever company produces the best aircraft at the most economical rate would expect to receive orders for more aircraft. This incentivizes and stimulates both companies to produce the aircraft on time and within budget. A dual award would necessarily guarantee that a minimum number of aircraft would be built per year by both companies, and production can be ramped up significantly to realize economies of scale as soon as either or both companies live up to their promises.

The Air Force Chief of Staff is on record as saying that USAF would need to buy 24 or more aircraft per year for a dual buy to make economic sense versus the maximum of 15 aircraft per year now planned. Industry experts agree that 12-18 aircraft produced annually per plant is an economic order of quantity, with both companies capable of expanding production to even higher levels should more funding be available or if driven by operational necessity.

#### **Operational Advantages and Synergies**

Operational flexibility is also greatly enhanced by having two different sized tanker aircraft, thus having both tankers in the force is a win-win for our military forces. Tankers execute many varied missions across the full range of operational scenarios, including homeland security, major wars, small scale contingencies and strike operations. They perform critical roles at every stage of a conflict or contingency, including the deployment, employment and redeployment of forces. In some cases a larger tanker with greater range and fuel offload is optimal to support operations, in others a smaller aircraft in larger numbers or with a reduced footprint is better suited for a particular mission.

For example, larger numbers of smaller tankers (more "booms in the air") are well suited when operational distances are shorter and offloads are smaller, such as for fighter employment and tactical operations support for current operations in the Middle East. Larger aircraft with extended ranges and greater fuel offload capability are better suited for strategic operations over larger distances, such as intercontinental fighter "drags" and the refueling of large aircraft such as strategic airlifters, reconnaissance aircraft, or bombers on global, long-distance or high-endurance missions.

Having both the Boeing and EADS aircraft in the inventory would provide operational planners greater opportunity and flexibility to manage and optimize the effectiveness of a diverse fleet. The operational usage history of the KC-135 and the KC-10 already validates this principle. Another example is illustrated by how Air Mobility Command currently utilizes its airlift force, with C-130s, C-17s and C-5s each performing a wide variety of missions that take advantage of their size and/or unique operational capabilities.

Consider also that either KC-X candidate brings far greater capa-

bilities than the KC-135 to the fight. These include significant airlift, aeromedical, data-link, multi-point refueling, self-deployment and on-board defensive system capabilities that will provide warfighting commanders with many more operational advantages and synergies than currently exist. If the history of the KC-135 serves as an example, the KC-X fleet could also serve as a future platform to replace other legacy systems and aircraft currently performing airborne command and control, reconnaissance, surveillance and a host of other missions. In short, a fast-track dual buy tanker acquisition strategy enables the rapid transformation of the air refueling force into a modern, flexible and efficient fleet with capabilities better suited for the realities of the 21st Century.

## Reducing the Operational Risks and Future Costs of an Aging Tanker Force

Retiring operationally cost-prohibitive and less capable aircraft would also allow the Air Force to focus on recapitalizing the tanker fleet and simultaneously bring new, transformational capabilities into the inventory. The faster we can get operational KC-X airplanes off the production line, then the sooner we can forego the costs of maintaining the older KC-135s by retiring them. The option to retire the smaller KC-10 force earlier than planned could also be considered. This would keep the tanker fleet at three (or two) versus four aircraft types, with the potential to further reduce overall fleet operational, maintenance and training costs.

One-for-one replacement for all the KC-135s is not realistic in any projected budgetary scenario – and not necessarily required. Our planning assumptions about aircraft availability, mission capable rates and operational effectiveness all change with the retirement of the KC-135 and the arrival of new, more capable and more reliable air-frames. First of all, the depot rate requirement for the new airplanes at 5% will be far below that of the current KC-135 rate of 19%. Second, mission capable (MC) rates for the KC-X are required to be at least 90-92% compared to the current MC rate of about 80% for the KC-135 fleet. These two factors alone will greatly increase the number of aircraft available on a daily basis and thus reduce the total number of fleet aircraft necessary to meet operational requirements.

From these factors, consider the following notional and rather simplified comparison of the KC-135 versus the KC-X: Mission capable rates are based on the number of possessed aircraft (those not in depot and thus not included in the calculation) and a number of locally-affected variables such as the effect of systems malfunctions on operations, plus the availability of spare parts and qualified maintenance expertise. Thus if we assume that 19% of the KC-135 force is in depot, then only 337 aircraft out of 415 are possessed at any given time. Multiplying this number times an 80% MC rate leaves only 270 aircraft capable of operating and executing the mission. In the case of the KC-X, applying a 5% depot rate and a 91% MC rate results in an equivalent fleet size in terms of overall numbers of just 313 aircraft – more than 100 less total airframes necessary to have 270 aircraft available!

A doubling of the planned production rate from 12-15 annually to 30 or more per year means that the nation could replace the capability of the entire KC-135 fleet in terms of available airplanes in just over 10 years. This is a compelling argument to simply stop the KC-135 depot flow, retire the aircraft, and take the money saved to build new tankers instead.

The Air Force currently expects to spend \$3.7 per year for 12-15 tanker aircraft in the 2014-2020 timeframe, thus it seems reasonable to assume that it would cost twice that (or less with economies of scale) to double production to 24-30 per year. Since USAF projects that annual depot costs for the KC-135 fleet will rise to \$6 billion by 2018, it seems entirely plausible that it may be LESS expensive to buy twice as many tankers per year than to continue to repair and maintain the KC-135. Simply reducing the depot flow rate for KC-135s by 50% might free up \$3 billion per year by 2018 in

O&M dollars that could be transferred to procurement accounts – if these depot savings can be applied towards procurement.

This requires Congressional approval as these accounts represent different "colors" of money. While the color of money matters in Congress, the top line budget for DoD could theoretically be held at a relatively constant level and thus not place any additional burden on the American taxpayer.

At this rate of production, the KC-10 fleet could also be replaced on a one-for-one basis in less than 3 years. The entire tanker fleet could thus be recapitalized in about 13 years if 30 or more new tankers are produced per year from 2014-2026, and the U.S. military would have about the same number of tankers available then as it has now. While the real requirement may be higher, USAF is still better off than it is today given the uncertainties and costs of keeping the geriatric tanker fleet it currently has.

Because both of the KC-X candidates are far more efficient and flexible than the tankers they will replace, the Air Force stands to reap even greater savings in its Operations and Maintenance (O&M) accounts over the long run while gaining other operational advantages inherent in the new aircraft.

#### Dollars and Sense – The Funding Challenge

The Department of Defense and the Air Force do not currently support a simultaneous dual buy tanker replacement program or a higher production rate due to the assumed extra cost and effort to execute such an effort. DoD is trying to cut tens of billions of dollars from its budget. At the same time, USAF cannot and will not advocate additional procurement funding for tankers because it must balance its acquisition needs across the service and all mission areas are already strained for resources. The potential total cost to replace the entire fleet of 474 KC-135 and KC-10 tankers is staggering, and the service cannot afford to dedicate all of its procurement dollars towards buying only tankers.

Yet the timing to replace these aircraft may not ever be better. The C-17 program is coming to an end, the F-35 program is being stretched out, and a new Air Force bomber has yet to make it off the drawing boards. Thus procurement funds to kick the tanker program into high gear might be easier to find sooner than later. A dual buy decision would require additional procurement funds in the short term in order to produce and evaluate test aircraft from both companies while they also prepare or build their base production and modification facilities for extended production runs. Possible savings might be found by reducing the number of test aircraft required. Once these non-recurring costs are sunk, the flyaway costs per aircraft would be determined by the number of aircraft being produced annually, with competition and economies of scale being major factors.

All acknowledge that a dual buy creates two supply chains and two separate aircraft training programs, but that is a common phenomenon in every other mission area and so would not be an unusual undertaking. Operational procedures for air refueling would likely remain relatively unchanged. Military construction costs and other support activity changes are typical for every procurement program and dependent on basing and other considerations. Retiring the KC-135 and KC-10 fleets sooner than planned will simplify and consolidate overall tanker capability. The Air Force and Air Mobility Command will bear the responsibility for analyzing these needs and coordinating them through the Department of Defense and Congress.

#### The Role of Congress

Congress will have a huge role in all these decisions and a successful tanker acquisition strategy is dependent on close, bipartisan support between Congress and the Executive Branch. The toughest part will be finding the money to fund the initial effort in the context of the current budget-cutting environment.

One possible and viable solution is for Congress to establish a "National Defense Air Refueling Fund" as a separate procurement account dedicated towards acquiring a new tanker fleet and from which money cannot be siphoned off for other service needs. This was done for both strategic airlift and sealift in the late 1990s when Congress realized that these two mission areas were not receiving enough funds or priority within the Air Force and the Navy.

#### An Effective, Long-Term Economic Stimulus

If ever there was a viable and sustainable economic stimulus program, this is it. Boeing says its proposal will employ 50,000 U.S. workers nationwide, while EADS claims it will employ 48,000. Are there any other proposals in Congress that would put this many Americans to work for a decade or more? In addition, a dual accelerated buy both retains and expands the aerospace industrial base in America, since EADS's offer includes building a new production plant in Alabama and Boeing would expand production activities in Washington and Kansas. Sub-contractors and suppliers would provide jobs throughout the rest of the country.

# Conclusion - National Leadership Essential to a Winning Strategy

This is a call for national leadership to end and win the tanker war. The President and the Secretary of Defense must stand up and courageously lead this effort. Members of Congress from both parties need to work together to fund it. The Air Force bears responsibility for managing the acquisition process. Air Mobility Command will necessarily plan and execute the transformation of the tanker force basing, manning and operations construct.

We are at a historic crossroads regarding our nation's air refueling force. The U.S. Air Force cannot afford to buy all the tankers the country needs to support our national security requirements. At our peril, we are looking at making short-term budgetary decisions on air refueling that increase our long-term strategic and operational risk. This cannot stand, and decisive leadership and action are required to mobilize the nation and make the financing of our air refueling force a national priority. We need a "National Defense Air Refueling Fund" and a tanker acquisition and retirement strategy that meets the country's joint, global air refueling needs both now and in the future. A dual-buy accelerated tanker program is a viable and cost-effective long-term solution that meets these needs.

Let's roll up our sleeves and work together as Americans to make this happen. Let's invigorate the U.S. aerospace industrial base, mass-produce tankers in America again and employ upwards of 100,000 U.S. citizens in the process. Let's avert an international trade war among allies and friends. Let's reduce the operational risk and cost of maintaining geriatric airplanes that should have been retired years ago. Let's retain and enhance the huge operational advantage and flexibility that the tanker force provides for the U.S. military. Let's win-win the tanker war for America!



Greg Cook is a retired Air Force Colonel now engaged as an independent analyst, author, speaker and consultant specializing in national defense and leadership issues. A life member of the Airlift/Tanker Association, Cook serves as the Association's Public Affairs Coordinator and is a frequent contributor to A/TQ. The positions expressed in this editorial are his own, and do not represent the views of the Airlift/Tanker Association, the U.S. Air

Force or the Department of Defense. For more information, go to www.GregoryPCook.com.



#### **Industry Partner Supports Aviation Community**

Founded in 1996 by a group of former Tektronix executives, Lightspeed Aviation was launched with a simple mission – to design and build the quietest, most comfortable aviation headsets in the world for the professional or general aviation pilot. The result

is a line of high-performance products that has dominated the ANR (Active Noise Reduction)

headset market ever since.

Today, Lightspeed Aviation is the innovation leader in aviation headsets. From comfort, clarity, technological advances to customer support, Lightspeed Aviation and its signature headset Zulu, have become the premium standard. Zulu is supporting national defense missions in a variety of aircraft ranging from ISR to tankers to AWACS.

For 15 years, Lightspeed Aviation has remained committed to performance and innovation. Theye've led the way with exceptional comfort, quiet and advanced features including

Bluetooth device connectivity and Front Row Center audio.

And recently, in Professional Pilot Magazine's survey of headset preference, Lightspeed Aviation was named the #1 aviation headset company in the electronic ANR category for 2010. Professional Pilot Magazine's judging criteria is based on clarity, comfort, technical advancement, durability, product support and value for price.

#### **Supporting the Aviation Community**

As members of the aviation community, Lightspeed Aviation looks for ways to partner with all members of the pilot world to advance the future of aviation. The company's goal is to work to identify worthy causes, give pilots a voice in who receives support and together with their customers, work to make a lasting difference. To that end, the company created the Lightspeed Aviation Foundation to support education and action outside the pilot community that will preserve and extend the future of aviation.

In April 2010, the newly formed Lightspeed Aviation Foundation announced a list of twenty aviation-related charities that had been nominated to receive grants during 2010. More than 20,000 pilots cast their votes for their favorite, with all funds coming from the Lightspeed Aviation Corporation.

"What's particularly unique about the foundation is that we do not ask or accept financial gifts to fund the foundation," according to Allan Schrader, founder and president of Lightspeed Aviation Foundation. "Perhaps, best of all, it is the pilots who choose where the money goes."

The 2010 Lightspeed Aviation Foundation recipients included: Angel Flight Central, Angel Flight East, Angel Flight Mid-Atlantic, Angel Flight Southeast/Mercy Flight Southeast, Angel Flight West, AOPA (Aircraft Owners and Pilots Association) Foundation, Brigade Air, Build A Plane, Civil Air Patrol, EAA Young Eagles. Experience Aviation, Helicopter Foundation International, Heritage Flight Foundation, JAARS, Lindbergh Foundation, Mission Aviation Fellowship, National Intercollegiate Flying Association, Ninety Nines, Veterans Airlift, and Wings of Hope.

The five receiving the most votes were presented with their checks

on 12 November at the 2010 AOPA Summit. At the presentation, Mr. Schrader, said that he was extremely gratified by the support that the foundation received during the first year. "All of those that were nominated are already doing "good" for aviation. We want to come along side to help build awareness and increase funding opportunities. And, we want to mobilize the pilot community to learn more about them and get involved." The 2010 recipients were:

#### Angel Flight Southeast/Mercy Flight Southeast

These non- profit volunteer pilot organizations coordinate free air transportation for children and adults with medical or compelling humanitarian needs in five southeastern states. Private aircraft is provided for patients to distant medical facilities when commercial service is not available, impractical or simply not affordable.

#### The Civil Air Patrol

Founded in 1941, the Civil Air Patrol operates as an all-volunteer civilian auxiliary of the U.S. Air Force when performing service for the federal government. Today the non-profit corporation develops our nation's youth through Cadet programs, provides aerospace education and responds to local, state and national emergencies.

#### JAARS

For more than 60 years, JAARS aviation has provided safe, dependable flight services to Bible translators and support personnel in locations that would otherwise remain inaccessible. The organization operates 27 aircraft in five countries and provides transportation and supplies to more than 200 translation programs.

#### Mission Aviation Fellowship

Using aviation and technology, Mission Aviation Fellowship meets the physical and spiritual needs of isolated people in 42 countries. It is an indispensable partner and servant to Christian organizations and other agencies in providing evangelism, medical assistance, disaster response and community development.

#### The Ninety-Nines

In 1929, ninety-nine women pilots joined to provide mutual support and advancement of aviation. It has continued to expand, and today the international organization promotes world fellowship through flight, provides networking and scholarship opportunities for women and aviation education in our communities.

In addition to these awards, in January, 2011, the Lightspeed Aviation Foundation will issue checks to all twenty nominees. These funds will come from gifts designated by new Lightspeed product purchasers at the time they register their product.

In January 2011, additional grants totaling in excess of \$50,000 were distributed among all 20 charities based on the amount designated by new Lightspeed Aviation customers at the time they registered their products.

Based in Lake Oswego, Oregon, since 1996, Lightspeed Aviation has emerged as the innovation leader in aviation headsets for the professional or general aviation pilot. From comfort, clarity, technological advances to customer support, Lightspeed Aviation and its signature headset Zulu, have become the premium standard. For more information, visit the company's professional pilot page at: www.lightspeedaviation.com/content.cfm/Professionals

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### Industry Partner HIGHILIGHTS

Our recently completed 42nd Annual A/TA Convention in Orlando was another successful event. The facilities available to us at the Marriott World Center Resort lived up to expectations and the outstanding support from the hotel staff made for a smooth operation. The Cypress Ballroom was a superb setting for our Exposition with the high ceilings and wide aisles. We had an increase in the number of exhibitors and revenues in 2010 in spite of the tough economic situation. All of us on the Airlift/Tanker Association National Board recognize that your loyal support is one of the key reasons that our convention is a success year after year and we appreciate your commitment to us. We will continue to strive to make each convention better than the last and with your help, we can make that happen.

We now turn our attention to the next convention which will be held at the Gaylord Opryland Hotel in Nashville, Tennessee, 3-6 November 2011 (after Halloween this year). This will be our first return to the Nashville since the devastating flood in May of 2010. The hotel officially reopened on 15 November after 195 days of extensive renovations and the hotel looks fantastic. Fortunately, most of the vegetation in the atriums fared well with the additional water. Gaylord used the renovation period to make some changes that were already on the books and as advertised, they have come back better than prior to the flood. We met with the Gaylord staff before Christmas to begin the planning cycle and the Gaylord staff is excited about A/TA returning this year. You will notice some major changes in the lobby area and some of the restaurants, but the renovations have resulted in a number of good changes.

Normally, I am not able to get the exhibitor data and updated forms prepared until around the first of March. That timeline was driven by our winter board meeting where we finalize the theme for the upcoming convention and begin to active preparations. I am considering a change that would allow me to get the general planning information out sooner (in late January/early February) and I would then notify potential exhibitors of the convention theme in a separate correspondence. We think this will assist you in your preparations and will reduce some of the pressure on me to turn the packages quickly after the board meeting (without too many errors). Additionally, we are considering providing general data for the following convention (next plus one) to assist you with your budgeting and planning processes.

For the first time in Orlando last year, we provided meeting rooms in the exhibit hall for private business meetings. The purpose of these rooms was to provide a private location for company to company or company to customer meetings. This arrangement is consistent with our policy of restricting marketing activities to the exposition in order to meet ethical standards. We provided these rooms in response to requests by a few exhibitors for a private meeting room. Our plan is to offer rooms again this year in Nashville. A/TA will again assign/schedule the rooms as needed to meet your private meeting requirements.

The 43rd Annual A/TA Convention in Nashville (3-6 November 2010) promises to another great convention – hope to see you there.

Bob Dawson, Industry Vice President

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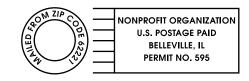
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