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by Col Gregory Cook, USAF (ret)

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ON THE COVER: AMC Museum, Dover AFB, Delaware. The first strategic airlifter to operate at Dover, AFB, is represented by the single remaining C-54M, which was specially modified during the Berlin Airlift for hauling coal. The Skymaster’s restoration was also quite extensive, and took several years. The inside shows examples of its World War II cargo and passenger configurations – and if parts become available will display how medical litters were carried in its Korean War role as a Medivac aircraft. During the restoration process, the museum was fortunate to find a photograph of this aircraft showing its military serial #44-9030 and the markings it carried in the Pacific Theater in World War II, which were still in place during her service in the Berlin Airlift and have been restored. Received into collection in November 1989.
A/TQ Wins APEX 2006 Award of Excellence!

It was announced in July that Airlift/Tanker Quarterly (A/TQ), and its editor/art director, Mr. Collin R. Bakse, had been awarded the APEX 2006 Award of Excellence in the Magazines & Journals Category for the publication’s Fall 2005 edition (Volume 13, Number 4).

As we approach the midpoint of the year I have been reflecting on the purpose and performance of the Association. In the fourteen years since I joined the Airlift/Tanker Association I have taken pride in its accomplishments and those of its membership. In supporting our Air Mobility warriors I think we do a good job of balancing our attention on the past, present and future. This year our convention will continue to build on that tradition. We will induct a truly deserving Air Mobility professional into the Hall of Fame. General Dwayne Cassidy served virtually his entire career in the mobility world. He was instrumental in the establishment of the U.S. Transportation Command, served as its first commander and continued to serve the Nation and the mobility community as a railroad executive serving on numerous government panels and advisory boards. He chaired our Association for several years. He and his wife Rosalie have been role models for several generations of men and women in the mobility arena. I look forward to celebrating his induction with all his many friends and admirers in November.

The convention will also give us another opportunity to honor today's force with our awards program. Once again the recipients will represent the very best this country has to offer....young men and women selflessly engaged around the globe fighting a War on Terror. The thrill of seeing these individuals walk across the stage and be recognized by their peers, superiors and forerunners never fades.

The seminar program and vendor participation are rapidly taking shape. Our theme: “America’s Air Mobility Team, The Decisive Edge” is providing a great framework for the seminar program. With its focus on the future of Total Mobility Force; Active, Guard, Reserve and CRAF, the program will provide a superb forum to discuss the issues and search for solutions. The display space is sold out and the vendors are asking for larger display areas so they can bring more emerging technology and cutting edge equipment for the participants to view and interact with. We have already received several confirmations for attendance by senior commanders who will share their views on Air Mobility and the War on Terror.

All in all the convention is shaping up as an event you will not want to miss. I encourage you to register early. See you in Orlando.

APEX 2006 – the 18th Annual Awards for Publication Excellence – is an international competition that recognizes outstanding publications from newsletters and magazines to annual reports, brochures and Web sites.

According to the APEX 2006 judges, “The awards were based on excellence in graphic design, quality of editorial content and the success of the entry in conveying the message and achieving overall communications effectiveness.”

The winning edition of A/TQ featured articles of interest to the Air Mobility community and biographies of the Airlift/Tanker Association’s 2005 Award Winners. The magazine also included a story entitled “Operation Babylift – Homeward Bound” A Story of Generosity, Gratitude and the Circle of Life, by Mr. Bakse, which related his first-hand experiences while traveling to Ho Chi Minh City, Vietnam, as a guest of World Airways on a historical trip to take approximately 30 young men and women back to the land of their birth 30 years after having been evacuated from Vietnam at the end of the Vietnam Conflict during “Operation Babylift.”

The APEX Awards for Publication Excellence is an annual competition for writers, editors, publications staff and business and nonprofit communicators. It is sponsored by Communications Concepts, Inc., publishers of business communication reports, including Writing That Works, a subscription monthly for professional communicators.

I thank the members of the A/TA for giving me the opportunity to work on A/TQ. This award belongs to all of you.

Collin R. Bakse, editor
Hooah air mobility warriors! Thanks for your continued dedication to our great nation.

One of the duties of the A/TA President is to manage the Enlisted Tuition Grant (ETG) program. Membership in the A/TA, coupled with individual professional development in an educational program, is the basis for an ETG award. Enlisted Tuition Grants are available to Air Force, Air National Guard and Air Force Reserve members pursuing undergraduate or graduate degrees. Eligibility includes all enlisted grades. The national board recently approved changes to our submission criteria, streamlining our processes to better serve the membership. Please review our association website (http://www.atalink.org) to review the modifications and forms. I congratulate all Airlift/Tanker Association ETG recipients on your record of continued success in achieving your educational goals. We hope your membership with the A/TA will create an environment of career success, education, and friendship.

I would like to welcome CMSgt Joseph Barron, Jr. as the new AMC Command Chief. Chief Barron will lead the enlisted feedback within the command for the association. Chief Barron and I recently met at Scott AFB to discuss our upcoming convention. Our new AMC Command Chief is eager to serve the Commander and troops of Air Mobility Command. Thanks for your dedication and welcome Chief Joe!

The A/TA Board of Officers recently gathered for our quarterly board meeting at Dover AFB, Delaware. I would like to thank Colonel Chad Manske and Major Bryce Middleton for their hospitality and support during our weekend meeting. Board members and advisors also had the opportunity to experience and tour the Air Mobility Museum. Thanks to Brig Gen (Ret) Michael Quaraccio and Michael Leister for your hospitality to our group and for your dedication to support and produce a first-class air mobility museum! I also sincerely thank Brig Gen (Ret) Dick Bundy who spoke to the A/TA Board about our organization supporting the Arnold Air Society. More to come later on this new A/TA sponsored scholarship program.

I would like to also recognize Major Paul Pepe as a new AMC-A/TA liaison officer. Welcome Paul - we look forward to your many contributions to the Airlift/Tanker Association.

We are off running with a great start for 2006. Although our association and convention attendance is substantially growing, we are committed to maintaining a quality program and air mobility family atmosphere at our convention. We look forward to seeing you at the Marriott World Center in Orlando, FL in October/November 2006.

In closing, many air mobility forces remain deployed serving our country. Our prayers and support are with you always. God bless you all.

Cabin Report...Secure!

Future A/TA Convention & Symposium Locations*

2006 ....Marriott World Center, Orlando
2007 ................. Opryland, Nashville
2008 .......... Marriott/Hilton, Anaheim
2009 ................. Opryland, Nashville
2010 ....Marriott World Center, Orlando
2011 ................. Opryland, Nashville
2012 .......... Marriott/Hilton, Anaheim

*Tentative outline of locations. Subject to change.

Secretary’s Notes

Do you all remember your first operational assignment? Of course you do. You remember the people, the unit, the base and the mission. If you are like me – it generates the warm feeling of home. Well, I went “home” for the last A/TA Board meeting. Back to Dover AFB – the people are as great as ever, the squadron no longer exists, the base is much, much improved, and the mission is very much the same. There was a profound sense of the passage of time when right next to my (then) squadron building is a museum and in the museum is an airplane I flew (some hard landings on that poor bird). We applaud the vitality and the leadership at Dover and the Eagle Chapter. A primary reason for holding the last Board meeting at Dover was to enter into a mutually supporting relationship with the Air Mobility Command Museum. Our bet is that many of you have not had the opportunity to visit it and see what a wonderful job a group of hard working volunteers have done in capturing and celebrating air mobility achievements over the years. And certainly, that is something we also do in this great association.

So, we’d like you do a few things. First, visit the museum’s website: www.amcmuseum.org. When you have a chance, go visit – take your friends and family – brag on yourself – this is your museum and it celebrates what you do. Do you have any Airlift/Tanker* related memorabilia that might find a better home in the museum than in your attic? Donate it! (Wonder if they will accept old “Secretary’s Notes”? – think I’ll try). Finally, the museum can’t run entirely on good will. Donations are always welcome. Many of you enjoy our Heritage Room at the annual convention. And I know that virtually every one of you look forward to the Bagger’s “Old Timers’ Seminar. This is the same good stuff!

Speaking of the convention – it’s right around the corner and I trust you have made your plans to attend. It’s not to be missed – see you there.

Cheers,

Barry

*The focus of the AMC Museum is Airlift and Aerial Refueling heritage. For general Air Force memorabilia consider the National Museum of the U.S. Air Force at Wright-Patterson AFB, Ohio.
“Huyser Chapter Golf Outing Huge Success”

Capping off a busy quarter, the Huyser chapter’s annual Charity Golf tournament was another huge success breaking last year’s record for money raised. Thanks to the superb efforts of Carol and Corky Mauchline and their crack team of volunteers, the chapter was able to raise close to $7000 for the college scholarship fund and charities programs. This year’s tournament drew nearly 144 players including many teams from our corporate sponsors in the area.

Also in attendance was the ATA’s National President, CMSgt (Ret) Mark Smith who helped to hand out checks to this year’s scholarship winners. At the conclusion of the golf tournament which saw the winning team shoot an amazing 18 under par, Chief Smith and Huyser Chapter President Jerry McCrave handed out three $1500 scholarships to three well deserved candidates.

This year’s winners were Ms Laurie Baronet who is majoring in Sociology at Southern Illinois University-Edwardsville, Ms Caroline Murdoch, who will major in Electrical Engineering at the University of Illinois and Ms Alicia Buehne, who will major in Business/Accounting at Eastern Illinois University in the fall. Their essays on “Humanitarian Efforts by AMC Here and Around the World” were rated the top three from a total of 14 candidates.

Because the chapter was able to due some creative fundraising during the past year and is planning on raffling off two seats on a B-17 and a B-24 in October, the chapter is looking to increase not only the value of the scholarships but also the number of available scholarships next year.

The tournaments activities concluded with the presentation of a $100 gift certificate to Ms Cindy Mills who over the last 10-15 years has been the quiet hero in the organization of the chapter’s annual golf tournaments. Jerry McCrave also thanked many of the corporate sponsors for the tournament but paid special thanks to Federated Software Group, Lockheed Martin and FMC for their generous contributions annually to the Huyser Chapter.

If their fundraising efforts go well again this year the chapter will continue to support many of the agencies in need on Scott AFB. Look for this along with any other chapter information at www.atahuyser.org.

Renowned Sculptor Delivers “A/TA Founding Members” Monument to Scott AFB.

Nestled among the live oaks near the small Texas Hill Country community of Boerne stands a converted cattle barn, the studio of Jerry McKenna. Born in Connellsville, PA, McKenna has lived in Texas for over forty years. He is proud of his Pennsylvania roots but says, “I have traveled the world over and I have yet to find a more perfect place to work. It offers beauty, peace, and sunshine for most of the year.” He has the distinction of holding both U.S. and Irish citizenship and he spends part of each year in Ireland.

A former Air Force officer and decorated Vietnam veteran, his early recognition came from his bronze portraits of famous Air Force leaders such as Generals Billy Mitchell, Ira C. Eaker, and Jimmy Doolittle. His work can be found in museums, parks, churches, public buildings, universities, halls of fame, and private collections around the world. In 1987, McKenna was chosen to create the Processional Cross for the mass celebrated by Pope John Paul II in San Antonio.

Mr. McKenna also created the busts of every inductee into the Airlift/Tanker Hall of Fame and, on 31 May 2006, he personally delivered the A/TA Founding Members monument which will be installed later this year in a place of distinction along the A/TA Walk of Fame at Scott AFB, Illinois.

Jerry, and his wife Gail, spent time along the Walk of Fame with Association President Mark Smith, former Association Chairman Duane Cassidy and a small cadre of A/TA members. While walking among the busts of mobility legends he has created, Mr. McKenna commented that of all the likenesses in the park, the bust of “Tooeey” Spatz was his favorite. The A/TA is lucky to have such a distinguished artist willing to create its Hall of Fame busts.

Over the years he has received many awards, “such as the University of Notre Dame’s 1962 Emil Jacques Medal of Fine Arts and the 2001 Rev. Anthony J. Lauck Award. One of his most recent honors was being named the 2003 Sports Sculptor of the Year by the All-American Football Foundation in recognition of his seventeen portrait busts in the Pro Hall of Fame, his sculpture of Knute Rockne at the College Football Hall of Fame, sculptures of Charles A. Comiskey at U. S. Cellular Field in Chicago, Frank Leahy and Moose Krause at Notre Dame Stadium, Elroy “Crazylegs” Hirsch for the University of Wisconsin, and many others. In 2001, Mr. McKenna was awarded an Honorary “ND” Monogram by the Notre Dame National Monogram Club.

Mr. McKenna began his formal study of art at the age of fourteen at the Gertrude Herbert School of Art in Augusta, Georgia. Later, he continued his studies at the American Academy of Art in Chicago and at the San Antonio Art Institute. He received Bachelor of Fine Arts degree from the University of Notre Dame, where he studied under Robert Leader and Dr. Stanley Sasha Sessler, and was influenced by the sculptor-in-residence, Ivan Mestrovic. He also received a Master of Arts from Webster University in 1981.

In addition to sculpture, McKenna’s other interests include reading, genealogy, Irish history, Notre Dame football, photography, spirited conversation…and an occasional fine cigar. He is an Artist-Fellow of the American Society of Aviation Artists and a Member of the Coppini Academy of Fine Arts. Married to Gail Thomas McKenna, an author and lecturer, he has five grown children - Colleen, Michael, Patrick, Sean, and Daniel.
The A/TA Enlisted Tuition Grant Program

Soar Like an Eagle...

Designed to help you reach your educational goals.

Airlift/Tanker Association Enlisted Tuition Grants are available to Air Force, Air National Guard and Air Force Reserve members pursuing undergraduate or graduate degrees.

ETG CRITERIA:

- Current Membership in the Airlift/Tanker Association
- Enlisted Member in Grades of E-1 through E-9
- Commander’s Recommendation
- 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.
- Classes must be completed as an active member of A/TA during the same calendar year as the submitted application. Exception: January/February applications can include the previous quarter classes (Sep-Dec) of the immediate past year.
- Checks will be issued upon completion of a course with proof of a grade of C or better in an accredited degree program
- Individuals are limited to one ETG per 12-month period.
- Student financial need is not a principal criterion
- May not be used for a lower or lateral previously awarded degree
- Additional details and forms are available online at www.atahlink.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.
THE AMC MUSEUM

Preserving the Proud History of Air Mobility at Dover AFB, Delaware

Listed on the National Register of Historic places, for its significance as the site of the US Army Air Forces rocket test center, a World War II hangar at Dover Air Force Base, Delaware, is the home of the Air Mobility Command (AMC) Museum. The museum houses a growing collection of vintage planes and artifacts that reflect the evolution and history of the Air Mobility Command, and of the varied missions of Dover AFB since its beginnings in 1941. The facility encloses over 20,000 square feet of aircraft display gallery plus 1,300 square feet of exhibit rooms. An attached 6,400 square foot building houses a theater, museum store, exhibit workshop, and various offices. A 100,000 square foot ramp allows close-up inspection of a remarkable array of aircraft, with a heavy emphasis on airlift and refueling aircraft.

The museum has an equally remarkable collection of air mobility related artifacts and archives accessible by appointment to researchers and members of the public. The archives include a collection of photos, limited to airlift, air refueling and other aircraft types stationed at Dover AFB; a very limited collection of documents related to Dover squadrons and some airlift history; restoration project drawings; an extensive series of Air Force films; a limited collection of aircrew oral history audio tapes; a library of military aviation video tapes; and, a very limited library of scrapbooks. Air Force policy prohibits loaning or trading artifacts or aircraft parts in our collection to anyone except other Department of Defense museums and only with written permission.

When requested, trained staff members conduct teaching programs at various statewide schools, in conjunction with the Delaware Aerospace Education Foundation.

The first strategic airlifter to operate at Dover, AFB, is represented by the single remaining C-54M, which was specially modified during the Berlin Airlift for hauling coal. The Skymaster’s restoration was also quite extensive, and took several years. The inside shows examples of its World War II cargo and passenger configurations – and if parts become available will display how medical litters were carried in its Korean War role as a Medivac aircraft. During the restoration process, the museum was fortunate to find a photograph of this aircraft showing its military serial #44-9030 and the markings it carried in the Pacific Theater in World War II, which were still in place during her service in the Berlin Airlift and have been restored. Received into collection in November 1989.
The AMC Museum began in 1986 with a single C-47A that was rejected as “beyond salvage” by other museums. Today, it stands immaculately restored, complete with D-Day invasion stripes, as it was when it served with the 61st Troop Carrier Squadron in World War II. Its extensive combat history is meticulously documented with actual photos and memorabilia donated by former crewmembers. This plane, Turf & Sport Special, was the centerpiece of a reunion in July 1990 that included the D-Day pilot, aerial engineer, and three of the 82nd Airborne Division paratroopers who jumped from it into St. Mere-Eglise on June 6, 1944 – forty-six years earlier.

Dover’s first strategic airlifter is represented by the only remaining C-54M, which was specially modified during the Berlin Airlift for hauling coal. The Skyknight’s restoration was also quite extensive, and took several years. The inside shows examples of its World War II cargo and passenger configurations. During the restoration process, museum staff were fortunate to find a photograph of the aircraft showing its military serial #44-9030 and the markings it carried in the Pacific Theater in World War II. They were still in place during her service in the Berlin Airlift, and the museum chose to have the restored aircraft display these historic markings.

In February 1998, the first C-141A “Starlifter” ever built arrived at the museum to take its place beside the C-141B already on display. Now visitors can immediately see the air-refueling receptacle and the twenty-five foot longer fuselage that makes the “B” model distinctively different from the “A” model.

The C-141A served as a test aircraft for its entire career. Just before being retired to the AMC Museum, it was used to tow an F-106 fighter on a 1000-foot long tow rope as a test to study the feasibility of launching the next generation of Space Shuttles from in-flight.

The “B” model C-141 in the museum’s collection was the last “Starlifter” stationed at Dover. Whenever volunteers are available it is open for inside tours. A ramp leading to the aft troop door makes access easy for people that don’t like to climb ladders, and it is wheelchair accessible.

While the museum’s aircraft collection is largely focused on air mobility aircraft not all those in collection are airlift or tanker aircraft. One of the most charismatic planes in the collection is undoubtedly the B-17 Flying Fortress. Although produced too late to see combat in WW II, #44-83624 saw extensive service. First in a highly secret project that resurrected the idea of using obsolete aircraft as radio-controlled flying bombs, then as a drone-control aircraft in the ground-to-air missile development program. In 1957, it was retired to the Air Force Museum at Wright-Patterson AFB, Ohio. In 1989, it was given to the AMC Museum to replace the famous B-17G Shoo-Shoo Baby that was restored to airworthy condition at Dover over a ten-year period.

Another one of museum’s unique aircraft is a C-123 Provider that served in Vietnam from 1963-1968, before a second career with the Drug Enforcement Agency and the Peruvian police. After “El Burro,” as it was called in Peru, was retired from the Drug Enforcement team, it flew to Dover in October 1990. It is painted in the markings it carried while in Vietnam.

The collection also includes a C-45 light cargo plane that served in Air America, the CIA airline and to represent Dover’s air defense role, an F-101B Voodoo and an F-106A Delta Dart. A PT-17 bi-plane trainer was restored using pieces from several aircraft and hand fabricated replica parts. It rounds out the museum’s collection of trainers, which includes a BT-13 and a T-33, the USAF’s first jet trainer. An HH-43 helicopter is on display in the main hangar, which is used to depict the Air Rescue Service story.

The C-119 Flying Boxcar represents the 512th Airlift Wing (Air Force Reserve). It was the last type they operated before becoming an associate wing at Dover. It is scheduled for restoration as soon as ownership is transferred from the US Forest Service to the USAF Museum system. The museum’s C-7 Caribou saw action in Vietnam where it was crewed by AMC Museum Curator, Jim Leech, and piloted by Col. Bill “I.E.” Hardie, the museum store manager.

A CG-4A Hadrian Glider is currently undergoing long-term conservation work in the museum’s restoration hangar. The CG-4 was the most widely used troop/cargo glider of World War II. They were used in the invasions of Sicily and Normandy, and for crossing the Rhine at Arnhem. Gliders were also used to supply remote bases in China and Burma. Although nearly 14,000 were built, less than a dozen remain in the world today. It is one of only two aircraft of this type owned by the USAF. The cockpit of the glider has been completely restored and is on display next to a cockpit mock-up of America’s newest Airlifter the C-17 Globemaster III.

Recently restored and on display is a KC-97 Stratofreighter, famous for its role as an air refueling tanker and a C-133 Cargomaster, the plane built specifically to haul intercontinental ballistic missiles during the Cold War. Also, reassembled in the summer of 2003, the museum’s next restoration project will be a C-121 Constellation.

Among the highlights of the collection are the museum’s unique C-130 Hercules, including the “Expo” that flew to Dover in October 1990. It is painted in the markings it carried when it served with the 61st Troop Carrier Squadron in World War II. They were still in place during her service in the Berlin Airlift, and the museum chose to have the restored aircraft display these historic markings.

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Along one wall of the hangar is a series of rooms that each tells a story. One relates the history of airlift during the Korean War. Other rooms relate the accomplishments of Air Force enlisted members, selected Air Force airlift operations, and one that explains Dover’s role in the development of rockets during World War II.

More aircraft and displays are being added regularly. Group tours are available, for museum information call (302) 677-5938. The museum is open Tuesday thru Saturday from 9 a.m. to 4 p.m. The museum is closed on Sunday/Monday and Federal Holidays. The museum also hosts a web site at www.amcmuseum.org, which features information on the museum’s history, its aircraft, artifact and archival collections, educational opportunities and ways to volunteer and otherwise support the museum.

An Extraordinary Collection of Air Mobility Aircraft (and More)

While the AMC Museum’s collection of air mobility artifacts and memorabilia is quite impressive, it is the museum’s collection of aircraft which provide the WOW factor for the 30,000-40,000 visitors to the museum each year:

B-17G “FLYING FORTRESS” S/N: 44-83624: Sole remaining aircraft from the 1948 Flying Bomb project (MB-17), also served as a Drone Director (DB-17G) with the Guided Missile Wing at Eglin AFB, FL. Restored to WW II configuration and painted in the markings of the 381st Bomb Group, “Sleepy Time Gal.” Received into collection in June 1989.

C-7A “CARIBOU” S/N: 63-09760: Vietnam veteran, later served for the Army as a Golden Knights Parachute Team aircraft. Received into collection in September 1991.
A/TA NATIONAL BOARD VISITS DOVER AFB AND TOURS
AIR MOBILITY COMMAND MUSEUM

† A/TA Photos by Collin Bakse.
‡ Photos courtesy AMCM.
PHOTOS:
C-5s on the Dover AFB flightline.†
MGen Quentin “Pete” Petersen, AMC DO, addresses the crowd at the Eagle Chapter luncheon.†
Bud Traynor shows off the C-5 model “door prize” he won at the luncheon.†
Bud at the controls of a C-5 simulator.†
The current A/TA President, Mark Smith (L) and two former Presidents, Bill Cannon (C) and Dave Pelletier (R) proving that retired Chiefs don’t forget everything they know about being loadmasters when they retire.†
Two technicians installing a new C-5 cockpit on the Dover AFB flightline.†
A C-119G “Flying Boxcar” on display at the AMC Museum.‡
A KC-97 “Stratotanker.”‡
The AMC Museum Commemorative Park.‡
A/TA President Mark Smith and A/TA Board of Advisors Chairman, Jim “the Bagman” Baginski in front of historic aircraft at the AMC Museum.†
A C-7A “Caribou.”†
A C-141B and a C-141A side by side at the AMC Museum.†
Bud Traynor (L) and MGen “Pete” Petersen looking aft inside the C-7A “Caribou.”†
A C-133 “Cargomaster.”†
C-45G “Expeditor.”‡
C-121 “Constellation” awaiting restoration efforts.‡
BGen (ret) Mike Quarancio, AMC Museum Executive Director, presents an overview of AMC Museum projects and programs to the A/TA Board of Officers.†
A/TA Photos by Collin Bakse.
† Photos courtesy AMC.‡
C-9A “NIGHTINGALE” S/N: 67-22584; First C-9 assigned to the Military Airlift Command in 1968, served for 37 years. Derived from the commercial DC-9, twenty were purchased specifically as medical evacuation aircraft. Received into collection in August 2005.

C-45G “EXPEDIENT” S/N: 51-11795; Remanufactured from an AT-11 Bombardier Trainer by Beech in 1953. Restored at Dover AFB. On loan from the Quantico Marine Corp Museum. Received into collection in April 1989. The C-45 was utilized by Air America which was the CIA Airline during the Southeast Asia conflict.

C-47A “SKYTRAIN” S/N: 42-92841; Fully documented veteran of D-Day paratroop drop at St. Mere Eglise. It also dropped paratroopers at Arnhem during Operation Market Garden, and towed gliders during the assault across the Rhine at Wesel. Served in the Berlin Airlift. Received into collection in October 1986.

C-54M “SKYMASTER” S/N: 44-9930; WWII service in the Pacific, modified to haul coal during the Berlin Airlift – sole remaining M model. After retirement used by the FBI as a Sky Marshal trainer. Received into collection in November 1989.

KC-97G “STRATOFOUGHTER” S/N: 53-220; Assigned to the Strategic Air Command in 1955 at Westover AFB, Mass. In 1965 it was converted to KC-97L status by the addition of two jet engines and transferred to the Tennessee Air National Guard. Received into collection in October 1999.

C-119G “FLYING BOXCAR” S/N: 10-870; This one served in the Royal Canadian Air Force, later used in civilian service as a fire bomber and in the movie Always. Received into collection in October 1991.

C-121 “SUPER CONSTELLATION” S/N: 4552; Actually a civilian 1049E Super Constellation. In storage, awaiting restoration. Received into collection in October 1997, the Super Constellation is undergoing long term restoration.

C-123K “PROVIDER” S/N: 54-0658; Vietnam veteran, later service with the Drug Enforcement Agency in Peru. Received into collection in October 1990.


C-130E “HERCULES” S/N: 69-6580; Tactical Airlifter, largest number made, over 50 years in production. Last stationed at Pope AFB. Received into collection 2 Feb 2004.

C-131D “SAMARITAN” S/N: 55-295; Former Air University and South Carolina Air National Guard staff plane. Received into collection in June 1989.

C-133B “CARGOMASTER” S/N: 59-536; The last C-133 built, it was assigned to Travis AFB, Calif. For years it was on display at the SAC Museum before transfer into collection in 2000.

C-141A “STARLIFTER” S/N: 61-2775; This was the very first C-141 ever built. Its maiden flight was on 17 December 1963. This is one of only four C-141’s that was not later modified into “B” model configuration. Received into collection in February 1998.

C-141B “STARLIFTER” S/N: 64-626; This was the last C-141 stationed at Dover Air Force Base before the transition to all C-5 aircraft, departed May 1972. The Cargo Compartment of this aircraft is wheelchair accessible. Received into collection in March 1996.


CG-4A “HADRIAN” S/N: 45-15009; World War II cargo glider. One of less than eight known surviving examples. Cockpit on display, fuselage-undergoing restoration. Received into collection in May 1995.

TG-4A S/N: 42-53078; World War II training glider. 154 bought to train glider pilots. Last used to train Delaware CAP pilots in 2002. AF only has two in collection. Donated by Major John Kalinowski (CAP) in May 2004.

HH-43 “HUSKIE” S/N: 62-4532; Used for crash/rescue and fire-fighting duties HH-43’s were part of the Military Airlift Command mission worldwide. A single HH-43 was assigned to Dover from 1959 to 1962. Received into collection in September 1998.

P-51D “MUSTANG” S/N: 44-63613; Considered by many to be the “best” American fighter during World War II. Restored by the 512th Airlift Wing at Dover in the markings of the Tuskegee Airmen. Received into collection in March 1994. [Recently Re-located]

BT-13 “VALIANT” S/N: 42-1639; The most widely used basic trainer from World War II. Popularly known as the “Vultee Vibrator” because it’s canopy rattled during maneuvers. Received into collection in April 1993.

PT-17 “KAYDET” S/N: 12-1741; World War II trainer was the first plane student pilots flew solo during their 60 hours of primary instruction. This is a composite aircraft made of a combination of original and hand made replacement parts. Received into collection in March 1993.

T-33A “SHOOTING STAR” S/N: 52-9497; Developed from the P-80 “Shooting Star” fighter, this type of two-seat trainer was used from the 1940s to the mid 1990s. Received into collection in November 1993.

UH-1 “HUEY”: The UH-1 Helicopter, although on display, is not part of the museum collection. It is used as a load trainer for the C-5 aircraft.

The AMC Museum Needs Your Support
There are many ways for individuals, companies and corporations to help ensure that the heritage of air mobility represented at the Air Mobility Command Museum continues to be maintained, nurtured and grown. One of the most rewarding ways to help is to become a member of the AMC Museum Foundation, a private not-for-profit organization dedicated to raising funds to enhance the programs and projects of the museum. Annual memberships are available in increments from $30.00 for individuals up to $25,000 for Platinum Eagle Members. Life membership is $500.00. All membership levels receive the museum’s quarterly newsletter and other benefits.

Another way to lend support is to purchase a “Pave a Path to History” engraved brick which will be added to the walkways at the museum’s Commemorative Park.

The museum’s Gift Shop offers a extensive array of air mobility and air force related items which make great gifts for anyone interested in aviation history. The gift shop can be reached by calling (302) 677-5002. Members receive a 10% gift shop discount.

Memorabilia Donations
The museum is interested in your, or Dad’s, or Granddad’s air mobility related artifacts and memorabilia, but before boxing it up and shipping it off, contact the museum at (302) 677-5938 or by email at museum@dover.af.mil, to see if your items are appropriate to the museum’s mission, and meet the requirements of the Air Force museum acquisition’s process.

Your Support Will Help Preserve the Proud History of Air Mobility!
INTRODUCTION

The past decade has seen significant change in the way the Department of Defense and the Armed Services define and fund their operational requirements. While the traditional Planning, Programming and Budgeting System (PPBS) endures, the process by which operational requirements are determined and programmed is changing dramatically. Capability-based planning is moving to the fore, slowly but decidedly replacing the deliberate, scenario-based planning construct that dominated defense planning over the last several decades. Instead of the individual Services developing systems and capabilities based on their own priorities, the new process is driven by the needs of Combatant Commanders in a joint requirements context.

The post–Cold War security environment drives planners to favor capability rather than threat-based planning as part of a transformational strategy. However, the environment presents some significant obstacles. For example, current operations increase the stress on military institutions at the same time that DOD and Service leaders demand significant reform.

While certain aspects of the previous system remain, transformational efforts across DOD are beginning to bear fruit. The most significant change revolves around implementation of the Joint Capabilities Integration and Development System (JCIDS), which in effect increases the decision-making authority of the Joint Staff and the Joint Requirements Oversight Council (JROC) with regard to defense capabilities acquisition, albeit with wide representation and participation by the Services, the Office of the Secretary of Defense (OSD) and other key stakeholders throughout the federal government. Within the JCIDS construct, a new “language” in defense planning and programming has emerged. This article will describe the key components of the JCIDS process, elaborating on its new terms, major players, and the new bodies charged with carrying out its precepts.

“Capability-based planning is moving to the fore, slowly but decidedly replacing the deliberate, scenario-based planning construct that dominated defense planning over the last several decades.”

JCIDS replaces what was formerly known as the Requirements Generation System (RGS), and changes many of the terms associated with that system. It is based on the need for a joint, concepts-centric capabilities identification process that will enable joint forces to meet the full range of military challenges in the future. A key tenet for meeting these challenges requires that the U.S. military transforms itself into a fully integrated, expeditionary, networked, decentralized, adaptable and lethal joint force able to achieve what is known as “decision superiority.”

To accomplish this transformation, DOD is implementing processes within JCIDS that assess existing and proposed capabilities in light of their contribution to future joint, allied and coalition operations. The process is expected to produce capability proposals that consider and integrate the full range of doctrine, organization, training, materiel, leadership and education, personnel and facilities (DOTMLPF) solutions in order to advance joint warfighting in both a unilateral and multinational context.

JCIDS is designed to ensure that the joint force has the capabilities necessary to perform across the range of military operations and challenges. Recent operations have emphasized the necessity of integrated and interoperable joint warfighting capabilities. This process will establish the linkage between joint concepts, the analysis needed to identify capabilities required to execute the concepts, and the systems delivering those capabilities. JCIDS implements an integrated, collaborative process to guide development of new capabilities through changes in DOTMLPF and policy.
recommendations are developed, evaluated and prioritized based on their contribution to future joint operations.

To achieve substantive improvements in joint warfighting and interoperability in the battlespace of the future, coordination among Department of Defense (DOD) Components is essential from the start of the JCIDS process. JCIDS should also improve coordination with other U.S. government departmental or agency staffs, and expands the potential for DOD capabilities to satisfy the needs of other government agencies and vice versa. JCIDS will provide a common coordination and integration process for DOD components working with other agencies and departments.

The procedures established in the JCIDS support the Chairman of the Joint Chiefs of Staff (CJCS) and the Joint Requirements Oversight Council (JROC) in identifying, assessing and prioritizing joint military capability needs. Validated and approved JCIDS documents provide this advice and assessment.

**THE BIRTH OF JCIDS**

JCIDS, the Defense Acquisition System, and the Planning, Programming, and Budgeting System (PPBS) form the principal DOD decision support processes for adapting and transforming the military forces to support the national military strategy and the defense strategy in accordance with DOD's vision of the future.

While PPBS has generally served DOD well, it has been criticized for becoming too bureaucratized over the years to adequately perform its intended purposes. PPBS was expected to forecast and describe the potential for DOD capabilities to satisfy the needs of other U.S. government departmental or agency staffs, and expands the expertise from the government, the defense industry and academia in addition to traditional military contributions.

JCIDS increases the power of the Joint Staff and the JROC to decide which new weapons and technology capabilities will reach the hands of Soldiers, Sailors, Airmen and Marines. The JROC will provide influential guidance on materiel needs to ensure their jointness from inception, instead of acting as a reviewing body for Service submitted requirements. From the Service perspective, there could be concerns that reversing the system from bottom-up to top-down means losing control of what systems their Services have at their disposal. However, the dedication of the new process to joint experimentation, repeated and periodic proposal evaluations, and the diverse membership of the boards involved in bringing future capabilities to the total force should ensure that the Services receive the right systems to allow them to work and fight jointly.

This process aims to ensure that future capabilities are “born” joint, meaning that systems will enable and enhance joint operations from their inception, whereas the old requirements generation system was Service-centric with joint interoperability as an afterthought. JCIDS operates top-down, with functionally-focused teams centered on future capabilities and effects for the Joint Force. The process was designed to better identify gaps in capabilities and achieve joint solutions to fill those gaps. Regional and functional combatant commanders give feedback early in the development process to see that their requirements are met. Integration with the acquisition process and information sharing with departments and agencies outside the Department of Defense (DOD) and the Science and Technology (S&T) community will improve under the new system.

“JCIDS replaces what was formerly known as the Requirements Generation System (RGS), and changes many of the terms associated with that system.”


In its methodology, JCIDS implements a capabilities-based approach that better leverages the expertise of all government agencies to identify improvements to existing capabilities and to develop new warfighting capabilities. This approach depends upon a collaborative process that utilizes joint concepts and integrated architectures to identify prioritized capability gaps and integrated joint DOTMLPF and policy approaches, both materiel and non-materiel, to resolve those gaps. The JCIDS approach aims to foster efficiency, flexibility, creativity and innovation in the acquisition process, and develops new capabilities for the Services by employing this approach from the government, the defense industry and academia in addition to traditional military contributions.

“JCIDS may help DOD better define its near and long-term military capability requirements in support of the PPBS process.”
JCIDS POLICY GUIDANCE, JOINT CONCEPTS AND JOINT FORCE CAPABILITIES

The JCIDS process begins with strategic policy guidance obtained from the National Security Strategy, the Defense Strategy, DOD’s Strategic Planning Guidance, and Joint Programming Guidance which also incorporate the department’s transformation initiatives and vision for the future. Defense Planning Scenarios contained in the Strategic Planning Guidance provide the warfighting commanders a starting point from which a Family of Joint Future Concepts is derived.

The Family of Joint Future Concepts incorporates strategic guidance and enduring national interests through a series of concept documents. The Joint Operations Concept is written in order to provide overarching guidance to the joint concept community of how the future joint force should operate. This guides the selection, writing and development of joint operating concepts, joint functional concepts and joint integrating concepts. These concepts together constitute the Family of Joint Future Concepts. Developed from top-level strategic guidance, Joint Future Concepts provide a top-down baseline for identifying future capabilities. The Family of Joint Future Concepts is used to underpin investment decisions leading to the development of new capabilities beyond the scope of the PPBS. New capability requirements, materiel or non-materiel, must relate directly to capabilities identified through the Family of Joint Future Concepts, whose hierarchical nature and deliberate process require close examination of needed capabilities through an iterative process of assessment. Therefore, joint future concepts are not intended to provide immediate solutions but proposed solutions that can afford careful examination over a more extended period of time.

A Joint Operations Concept (JOpsC) is an overarching concept that guides the development of future Joint Force Capabilities (JFCs). It broadly describes how the joint force is expected to operate 10 to 20 years in the future across the range of military operations and in all domains. It emphasizes operations within a multilateral environment in collaboration with interagency and multinational partners. The JOpsC describes the proposed end states derived from strategy as military problems and the key characteristics of the future joint force. It provides the operational context for the transformation of the Armed Forces of the United States by linking strategic guidance with the integrated application of JFCs.

A Joint Operating Concept (JOC) is an articulation of how a future joint force commander will plan, prepare, deploy, employ, and sustain a joint force against potential adversaries’ capabilities or crisis situations specified within the range of military operations. JOCs guide the development and integration of JFCs to provide joint capabilities. They articulate the measurable detail needed to conduct experimentation and allow decision makers to compare alternatives.

The Commander of US Joint Forces Command (USJFCOM) is functionally responsible to CJCS for leading joint concept development and experimentation by integrating joint experimentation into the development of all joint concepts. As the DOD Executive Agent for joint warfighting experimentation, USJFCOM develops combined operational warfighting concepts and integrates multinational and interagency warfighting transformation efforts in coordination with other combatant commands. USJFCOM also coordinates the efforts of the Services, combatant commands and Defense agencies to support joint interoperability and future joint warfighting capabilities.

Concepts of Operations (CONOPSs) and joint tasks are focused on capabilities required in the near-term (now to 7 years in the future). CONOPSs and joint tasks allow the joint community to adjust or divest current capabilities by providing the operational context needed to substantiate current programs.

Joint commanders will integrate a set of related military tasks to attain capabilities required across the range of military operations. Although broadly described within the Joint Operations Concepts, they derive specific context from the joint operating concepts and promote common attributes in sufficient detail to conduct experimentation and measure effectiveness.

The JCIDS analysis process that follows identifies capability gaps,
required. While it is recognized that DOTMLPF and policy changes are an integral part of any major acquisition program, those changes are addressed within the scope of the CDDs and CPDs and not through the joint DCR process. Joint DCRs are normally referred to as “non-materiel” solutions, while acquisition programs are referred to as “materiel” solutions. As innovation, new technologies, joint experimentation, joint testing, capability reviews, combatant commanders’ integrated priority lists, warfighting lessons learned, and other processes spawn potential enhancements to operational capabilities, the JROC will review specific change recommendations for joint warfighting utility and programmatic implications. Based on the findings, the JROC will provide recommendations for CJCS review and action. The goal for implementing Joint DCRs is less than 18 months from submittal to the Joint Staff.

KEY PLAYERS AND THEIR JCIDS RESPONSIBILITIES

The Joint Requirements Oversight Council (JROC) retains its position as the most powerful decision making body in the Joint community with regard to operational requirements and programs. Chaired by the VCJCS, the JROC oversees the JCIDS process and prepares the Chairman’s Program Recommendation (CPR) and Chairman’s Program Assessment (CPA). The CPR provides the Chairman’s recommendations to OSD for inclusion in the Joint Planning Guidance, and the CPA is the Chairman’s assessment of the Service’s Program Objective Memorandums (POMs) in accordance with PPBS. With membership that includes all four service Vice Chiefs, the JROC reviews programs designated as “JROC Interest,” supports the acquisition review process, and may review JCIDS documents or any other issues that have joint interest. The JROC will also review programs at the request of key defense leaders with significant acquisition responsibilities, including the Secretary of Defense, Deputy Secretary of Defense and others. In addition, the JROC determines which Functional Capabilities Boards (FCBs) will be established, disbanded or combined, and which functional areas are assigned to each FCB. Finally, it identifies the lead organization responsible for chairing each FCB. Official JROC correspondence that is generally directed to an audience external to the JROC is called a Joint Requirements Oversight Council Memorandum (JROCM). JROCMs are usually decisional in nature.

The Joint Capabilities Board (JCB) functions to assist the JROC in carrying out its duties and responsibilities. The JCB reviews and, if appropriate, endorses all JCIDS-related and DOTMLPF proposals prior to their submission to the JROC. The JCB is chaired by the Director of the Joint Staff J-8 Directorate and is comprised of general and flag officer representatives of the Services.

The Gatekeeper is that individual who first reviews all JCIDS proposals and makes the initial Joint Potential Designation in accordance with JCIDS directives. The Gatekeeper also determines the lead and supporting FCBs who will have responsibility for capability proposals and any required supporting analysis. The Vice Director of the Joint Staff J-8 Directorate serves as the Gatekeeper, and is supported in these functions by U.S. Joint Forces Command (USJFCOM), other elements of the Joint Staff and the FCBs. The Gatekeeper assignment determines the body responsible for final validation and approval of a JCIDS document, any certifications that may be required, and the staffing distribution for the document. The gatekeeper periodically reevaluates the Joint Potential Designation throughout the process because changes in the proposed capability may require it to change as well.

Functional Capabilities Boards (FCBs). When the gatekeeper has completed the initial review, he or she assigns the analysis to a Functional Capabilities Board (FCB), a permanently established body that is responsible for the organization, analysis, and prioritization of joint warfighting capabilities within an assigned functional area. FCBs are responsible for ensuring that new capabilities are developed within a joint warfighting context, that proposals are consistent with the Joint Force as described in the Joint Operating Concepts, and are charged with validating Joint Impact proposals. They are also responsible for organizing, analyzing and prioritizing capabilities proposals, supervising development and updating of functional concepts, and ensuring that integrated architectures are reflective of their functional area. FCB chairs are usually at the brigadier general or equivalent level, while membership of an FCB includes the Services as well as representatives of the combatant commanders, key OSD staff, and the space and intelligence communities. This expanded membership gives the FCB chair the tools to make better and more broadly informed recommendations on the capability proposals to the JROC and involves the acquisition community earlier in the process than before.

The JCB will ensure that supporting analyses adequately leverage the expertise of the DOD Components, in particular, the Services, combatant commands, agencies, DOD laboratories, science and technology community initiatives, experimentation initiatives, non-DOD agencies and industry to identify promising materiel and non-materiel approaches.

FCB Working Groups provide analytical support for the FCBs. They perform the review and assessment of JCIDS documents, work with the sponsors to resolve issues and make recommendations to the FCB. In support of the JCIDS process, each FCB working group coordinates with and assists the sponsor during JCIDS document development to ensure cross-component synchronization of proposals, and that joint warfighting capability gaps are being adequately addressed.

Within the JCIDS process, a Sponsor is expected to lead the JCIDS analyses required when developing an Initial Capabilities Document (ICD) in coordination and collaboration with appropriate organizations. They evaluate the affordability of proposals and approaches and coordinate with non-DoD departments and agencies on interagency capability matters. The sponsor should work closely with the appropriate FCBs during the analysis process to ensure the analysis is truly joint, and provide support to combatant commands and FCBs in developing Joint Capabilities Documents (JCDs). After developing JCIDS documentation, they present it for review by
decision making bodies, and resolve issues that arise during the staffing, certification and validation processes. A DOD Service component (or other organization that oversees the JCIDS analyses) usually acts in this capacity.

The Services also coordinate on JROC Interest documents and may review documents developed by other sponsors to identify opportunities for cross-component utilization and harmonization of capabilities. The Services retain responsibility for developing Service-specific operational concepts and experimenting within core competencies, supporting joint concept development with Service experimentation, providing feedback from the field, supporting joint experimentation, and providing joint testing and overseeing integration of validated joint DCRs. Combatant Commanders. The combatant commands have been assigned specific mission responsibilities in the Unified Command Plan (UCP). They will comment on all JCIDS capabilities documents that fall within their assigned missions and act as an advocate or advisor to the JROC as required. The combatant commands are provided the opportunity to review and comment on all documents designated as JROC Interest before they are validated and approved. Combatant commands may also conduct JCIDS functional area and functional needs analyses and submit a JCD that identifies capabilities needed and gaps or redundancies that exist. The combatant command leverages the expertise of its components and may coordinate and receive assistance from a sponsor in this effort. In many circumstances, it may be appropriate for the combatant commander to identify initiatives to the responsible component, who may then coordinate appropriate analysis and documentation activities. Additionally, combatant commanders may independently conduct JCIDS analysis and submit capabilities documents. Combatant commanders have the opportunity to participate in all FCB deliberations, although it remains the responsibility of the combatant commander to exercise and coordinate their participation.

ANALYSIS - THE KEY TO JCIDS

The key to understanding JCIDS is its four levels of analysis and how proposals are steered through the process to support acquisition and programming decisions. Within the context of the top-level strategic guidance and the derived Family of Joint Concepts, functional areas are defined and assigned to the Functional Capabilities Boards. As JCIDS proposals are introduced by their sponsors, they are directed by the Gatekeeper to the appropriate FCBs and subjected to review and recommendation for further analysis. The JCB and JROC decide which issues will undergo full-scale analysis, and which may ultimately result in significant or major acquisition programs. Acquisition Categories (ACATs) determine the level of review, decision authority and applicable procedures that will be followed, and were established to facilitate decentralized decision-making and execution and to comply with statutorily imposed requirements. The largest acquisition programs fall into the ACAT 1 category.

Major functional areas, as defined in the Family of Joint Concepts, will undergo what is known as a Capabilities-Based Assessment (CBA) which consists of a Functional Area Analysis (FAA), a Functional Needs Analysis (FNA) a Functional Solutions Analysis (FSA) and Post-Independent Analysis. The results of the CBA are used to develop either a Joint Capabilities Document or an Initial Capabilities Document.

The Functional Area Analysis identifies operational tasks, conditions and standards needed to accomplish military objectives. It results in lists of tasks that must be accomplished and the types of capabilities needed to do them. The Functional Needs Analysis assesses the ability of current and programmed capabilities to accomplish the tasks identified in the Functional Area Analysis, under a variety of conditions and to designated standards. It results in a list of capability gaps that define what shortfalls exist across the joint force. The Functional Solutions Analysis then evaluates the range of possible solutions from an operational perspective, taking both materiel and non-materiel solutions into account. This level of analysis produces a list of potential need-based solutions. Finally,

"The key to understanding JCIDS is its four levels of analysis and how proposals are steered through the process to support acquisition and programming decisions."

Post-Independent Analysis by the various players in the JCIDS process results in the development of a JCD or ICD.

JCIDS ROLE IN THE ACQUISITION SYSTEM

Three new documents assist in defining needed capabilities, guiding materiel development, and directing the production of capabilities within the phases of the Defense acquisition system. The sponsor develops each document as analysis and subsequent acquisition decisions progress, and the JROC reviews each document before an acquisition milestone decision is reached. Some documents that were approved under the Requirements Generation System still remain valid, subject to certain exclusions.

The Initial Capabilities Document (ICD) documents the need to resolve a specific capability gap, or set of capability gaps, as identified through the JCIDS analysis process, usually a CBA. It replaces what was formerly known as a Mission Needs Statement (MNS). An ICD defines the capability gap(s) in terms of the functional area, the relevant range of military operations, the desired effects, the time required, and DOTMLPF and policy implications and constraints. The ICD summarizes the results of the DOTMLPF and policy analysis and the DOTMLPF approaches, both material and non-material, that may deliver the required capability. It is based on an analysis of the Family of Joint Future Concepts and CONOPS, or on the results of the analysis used to develop a relevant JCD. The outcome of an ICD could be one or more Joint DCRs or Capability Development Documents.

The ICD supports the concept decision, an Analysis of Alternatives (AoA), a technology development strategy, further refinement and/or development of integrated architectures, and subsequent technology development phase activities. ICDs should be non-system specific and non-Service, agency or activity specific to ensure capabilities are being developed in consideration of the joint context. The ICD corresponds to the initial phases of the acquisition system, known as the Concept Refinement and Technology Development phases, which result in concept refinement and Milestone A acquisition decisions.

After the approval of the ICD, integrated architectures and capability roadmaps must be developed and/or updated. If the solution is likely to result in an ACAT 1 acquisition program or if directed, the sponsor must conduct an Analysis of Alternatives (AoA). The AoA evaluates the performance, operational effectiveness, operational suitability and estimated costs of alternative systems to meet a mission capability. It assesses the advantages and disadvantages of alternatives being considered to satisfy capabilities, including the sensitivity of each alternative to possible changes in key assumptions or variables. The AoA provides key inputs for defining the system capabilities and identifies materiel approaches that should be recommended for further development at Milestone A.

AoA results are reviewed by the lead FCB to ensure that the refined concept or approach continues to meet the warfighter’s capability needs and that appropriate attributes are designated as
Key Performance Parameters (KPPs). KPPs are those attributes or characteristics of a system that are considered critical or essential to the development of an effective military capability and those attributes that make a significant contribution to the key characteristics as defined in the Joint Operations Concepts. In the absence of an AoA, the sponsor must be able to provide adequate analysis to justify the adequacy of the approach and to support the determination of the appropriate KPPs. All of this is included in the Technology Development phase of the acquisition process.

Upon completion of the Technology Development phase, which follows the Milestone A decision, the sponsor writes a Capability Development Document (CDD), which replaces the Milestone B Operational Requirements Document (ORD) in the old system. The CDD provides more detail on material solutions to fill the identified capability gaps, and defines the thresholds and objectives against which the capability will be measured. Guided by the ICD, the AoA, associated integrated architectures, capability roadmaps, concept refinement and technology development activities, the CDD captures the information necessary to develop a proposed program (or programs), normally using an evolutionary acquisition strategy. The CDD outlines an affordable increment of capability, an increment being a militarily useful and supportable operational capability that can be effectively developed, produced or acquired, deployed and sustained. Each increment of capability will have its own set of KPPs, with thresholds and objectives established by the sponsor with input from the user. The validated and approved CDD supports the development of related documents and the Milestone B acquisition decision.

The CDD provides the operational performance attributes necessary for the acquisition community to design the proposed system, and permit the test and evaluation community to evaluate the proposed system in anticipated operational environments. The CDD includes KPPs and other parameters that will guide the development, demonstration and testing of the current increment. The KPPs will be linked through the capabilities defined in the ICD to the key characteristics from the JOpsC. The AoA should be reviewed for its relevance for each program increment requiring a Milestone B decision and, if necessary, the AoA should be updated or a new one initiated.

In addition to describing the current increment, the CDD will outline the overall strategy to develop the full or complete capability. For evolutionary acquisition programs, the CDD will outline the increments delivered to date, the current increment, and future increments of the acquisition program to deliver the full operational capability as required. Once approved, the CDD guides the System Development and Demonstration Phase of the acquisition process.

During this phase, the sponsor develops a final document, the Capability Production Document (CPD), which addresses the production attributes and quantities specific to a single increment of an acquisition program. A CPD replaces what was known as the Milestone C ORD in the old system. The sponsor finalizes a CPD after design readiness review, when projected capabilities of the increment in development have been specified with sufficient accuracy to begin production. The validated and approved CPD supports the development of the required dependent documents and supports the Milestone C decision review before the program enters low-rate production and operational test and evaluation. The CPD narrows the generalized performance and cost parameters from the CDD into more precise performance estimates for the production system. The CPD must be validated and approved before Milestone C. The CPD provides refined operational performance, schedule, supportability and affordability attributes to ensure the increment adequately addresses the warfighter capability needs and the cost is commensurate with the additional capability.

Finally, because some analyses are based on future concepts not yet in the force, the JCIDS process still employs the Capstone Requirements Document (CRD) from the Requirements Generation System to describe standards that apply to classes of systems. The CRD contains capabilities-based requirements that facilitate the development of CDDs and CPDs by providing a common framework and operational concept to guide their development. As concepts develop, the JROC will retire existing CRDs, with new CRDs developed only when the JROC finds existing documents insufficient.

CONCLUSION: THE PROMISE OF JCIDS

The JCIDS process represents nothing less than the transformation of DOD’s requirements generation process even as it continues to evolve. If its goals are realized, JCIDS will provide an enhanced methodology guided by national priorities and joint concepts to identify joint force capabilities required to meet and defeat current or projected threats to U.S. national security. It will identify and describe existing or future shortcomings, prioritize capability gaps, eliminate redundancies in warfighting capabilities, and identify the most effective approaches to resolving those shortcomings. It will provide better linkage to the acquisition system by engaging the acquisition community earlier in the capabilities development process, and it will improve coordination with other U.S. government departments or national agencies.

Implementing JCIDS requires increased effort at the onset, but if it operates as envisioned, Soldiers, Sailors, Airmen and Marines will reap benefits in the form of well-tooled, joint solutions designed with their needs in mind. Needed capabilities can be identified and solutions created within a joint context that capitalizes on each Service’s strengths to create the best capability needed for joint warfighting commanders. Systems will be born joint, from the top down, instead of requiring retooling after the fact to provide suboptimal solutions.

Based on the need for a joint, concepts-centric capabilities identification process, JCIDS will enable joint forces to meet the full range of military challenges in the future. As it meets these challenges, the U.S. military will necessarily transform itself into a fully integrated, expeditionary, networked, decentralized, adaptable and lethal joint force capable of defeating any enemy it faces.

“The JCIDS process represents nothing less than the transformation of DOD’s requirements generation process.”

Gregory P. Cook is a retired Air Force Colonel now engaged as an independent analyst, writer and consultant. His 25-year military career culminated with his assignment as Chief of the Studies, Analysis and Gaming Division in the Joint Staff at the Pentagon, where he led in-depth studies, analyses and exercises for the nation’s defense leaders. Colonel Cook is a command pilot with over 3700 flying hours in strategic airlift, air refueling, operational support and training aircraft. He is a veteran of Operations JUST CAUSE, DESERT STORM, NORTHERN WATCH and IRAQI FREEDOM, as well as numerous humanitarian and disaster relief operations across the globe. During his military career, he commanded two Air Force operations squadrons and an Air Mobility Operations Group. He also completed three headquarters assignments at Air Mobility Command and the Air Staff in the areas of long-range strategy, plans and programs. A life member of the Airlift/Tanker Association, Cook serves as its Public Affairs Coordinator.
Lost in Tibet:
The Untold Story of Five American Airmen, a Doomed Plane and the Will to Survive

“Follow the Beam to Destination.”

To “Hump” aircrews flying the India-China-India Route, it was a simple directive. It was so simple, in fact, that airlift staffers in India eliminated the navigator position on the C-87, the pure cargo hauling version of the B-24.* This made staffers on both ends of the route happy, as an additional 1,000 pounds could be carried to China; and Airlift staffers also calculated that a “returning to India empty” C-87 needed only 1,200 gallons of fuel, so anything above that fuel figure could be, and was, siphoned off at Kunming, China, for local air operations. What to worry? Follow the beam. Nothing can go wrong if you follow the beam.

At dusk on 30 November 1943, a C-87 with a crew of four aboard, plus a vehicle mechanic (on a morale boosting “incentive flight”), took off from Kunming, China heading for Jorhat, India. They landed, minus their plane, in a severely down rated “Shangri-La,” to which none would ever long to return.

They had lost the beam over Burma. Ground stations couldn’t triangulate a fix on them. Hours later their radio went silent. Though they calculated they were over India’s steamy Assam Valley region 20,000 foot mountains kept appearing. Finally, fuel starvation forced them to bail out into the dark at 18,500 feet, expecting a 15,000 foot parachute ride. One or two parachute swings later they slammed into the barren mountainsides of Tibet.

They found no “Shangri-La” like setting. The people were helpful, but lived a bare rock existence. The Tibetan government thought them aerial spies for the invasion plotting Chinese who had invasion troops on the border (troops in part being supplied by equipment airlifted to China, at high human cost, to fight the Japanese). And the Chinese politics sought only to use the distressed American airmen as pawns to gain Western favor regarding reoccupying the breakaway province. The aircrew’s only real friends were at the British legation in Lhasa, yet the British still wanted them gone quickly (to renew political tranquility on India’s northern frontier). What the aircrew wanted was a return to India, where it now seemed to them healthy conditions, a favorable climate, good food, and political stability prevailed.

It would take 51 days of cold quarters, sub-miserable food, winter ridge-riding and major power political wrangling for them to return to their own, by now an oft dreamed of “Shangri-La” – the U.S. Army airfield at, Jorhat, India.

A good read, especially the survival aspects – an aircrew having to explain to villagers in sign language they parachuted from an airplane – “What’s an airplane?”

*Its fuel hauling cousin, the C-107, was trouble plagued, often landing with all four engines on fire – not a good thing for a tanker.

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C-87 Liberator Express

The C-87 Liberator Express was a transport derivative of the B-24 Liberator heavy bomber. It was used during World War II. The aircraft was hastily designed in early 1942 to fulfill the need for a heavy transport with longer range and better high-altitude performance than the Douglas C-47, the mostly widely available U.S. Army transport aircraft at the time. The first C-87 prototype was based on a crash-damaged B-24. Minimal changes were made to convert the bomber into a transport configuration, mostly consisting of the deletion of the gun turrets and other armament; the installation of a cargo floor, loading doors, seats, and windows; the use of a windowless sheetmetal nose in place of the glassed-in bomber nose; and rearrangement of the crew compartment.

Most C-87’s were operated by the U.S. Air Transport Command and flown by civilian crews from U.S. civil airlines. The planes were initially used on transoceanic routes too long to be flown by the C-47. After the Japanese invasion of Burma in 1942, the C-87 was used for flying war material from India to besieged Chinese forces over “The Hump”, the treacherous air route that crossed the Himalayas. When the route was established, the C-87 was the only readily available American transport with high-altitude performance good enough to fly this route while carrying a large cargo load.

The C-87 suffered from a poor reputation amongst its crews. Complaints centered around the clumsy flight control layout, frequent engine problems, and the numerous often-leaking fuel lines which crisscrossed the crew compartment, creating a fire hazard and frequently threatening to overcome the flight crews with noxious gasoline fumes. Several C-87’s experienced fuel fires inside the crew area during flight. The craft also had dangerously tricky flight characteristics in the event of in-flight airframe icing, a frequent occurrence over the Himalayas in the days before accurate weather forecasting.

The airplane could also be difficult to fly if its center of gravity was located in the wrong place due to improper cargo loading. This problem could be traced to the design’s roots as a bomber. The bomb racks of the B-24 were located in a fixed position, making it almost impossible to load the craft incorrectly, so the airplane was not designed to be tolerant of improper loading. A purpose-built transport plane would have been designed to take loading variations into account.

The C-87 was rapidly withdrawn from front-line transport service after the introduction of the Douglas C-54, which offered similar high-altitude performance combined with greater reliability.

A total of 287 C-87’s were factory-built alongside the B-24 at the Consolidated Aircraft plant in Fort Worth, Texas, although an unverified number of additional “C-87” aircraft were created by performing field conversions on airframes that originally rolled off the production line as B-24’s.


Murdock M. Moore is a twenty two year veteran of military service, mostly in airlift support, a long time A/TA member and has contributed several historical articles for inclusion in A/TQ.
Register Early and Save!
Submit Your Registration by 22 September and Save $70.00!
(Compared to On-Site Registration)
Registration Form on Page 32.

Convention Information Contacts:

Hotel Room Reservations & Info: Miles Wiley: (703) 660-9627 | atarooms@cox.net
   Info needed to secure a room: Your Name; SSN Last-4; Number of Rooms Requested;
   Arrival Date/Time; Departure Date/Time; Phone Number; and E-Mail Address.
   (Read complete details under “Hotel Reservations” on page 23.)

   Convention Information & Registration: Bud Traynor: (703) 385-2802 | ata@atalink.org
   Golf Tournament: Wally Herzog: (817) 573-1554 | wherzog@sargentfletcher.com
   Magazine Advertising: Nick McCollough: (478) 923-0968 | nmccollough@ray.mgacoxmail.com
   Convention Symposium & Seminars: Jeffrey Bigelow: jeffrey.bigelow@jdtc.jfcom.mil
   Convention Exhibits: Bob Dawson: (951) 270-3065 | bob.dawson@smiths-aerospace.com
   Airlift/Tanker Quarterly Articles/Stories/Ads: Collin Bakse: (618) 235-5070 | bakse@apci.net

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**Register Now for the Air Mobility Community’s Premiere Annual Event!**

**The 2006 A/TA Convention & Symposium.**

**ORLANDO WORLD CENTER MARRIOTT**
**RESORT & CONVENTION CENTER**
**8701 WORLD CENTER DRIVE, ORLANDO, FLORIDA**

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**Events Overview**

**Sunday, October 29th**
- **Registration & Banquet Seating Reservations**
- **Golf Tournament**

**Monday, October 30th**
- **Exhibit Hall Activities**
- **Registration & Banquet Seating Reservations**

**Tuesday, October 31st**
- **Exhibit Hall Activities**
- **Registration**

**Wednesday, November 1st**
- **Farewell Brunch**

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**PROFESSIONAL DEVELOPMENT SEMINARS**
**AWARDS PRESENTATIONS**
**AEROSPACE INDUSTRY EXHIBITS**
**ANNUAL MEMBERSHIP MEETING**
**HALL OF FAME BANQUET**
**SPECIAL RECEPTIONS**
**AND MUCH MORE!**
2006 Convention & Symposium Rules of Engagement

We know that the instructions for the registration form have become quite lengthy, but this is to allow the maximum flexibility for the registrant. Without the complexity, cancellation and refund opportunities would be impossible. There are limits to the flexibility however. When Bud and Pam move to the convention site (approx 23 Oct, so moves the A/TA “headquarters office.” The A/TA office phone, (703) 385-2802, will be forwarded to Bud’s cell phone. If you can’t reach them that way, call the hotel and track them down. Every year, we have soulful requests for exceptions to our rules on refunds, including membership refunds. We don’t grant them. Ever. No duty or family emergency releases you from your responsibility to cancel or from the cancellation fee.

2006 Overview:

Government folks – before registering: RE-ACTIVATE YOUR GTC CARD by calling the 800-number on the back! After even a few days of non-use, Government cards get turned off for no apparent reason. Please call them first – it is very likely not active.

Then read all the instructions below, especially the cancellation instructions.

New this Year: The Association, Miles Wiley, is managing all room reservations (see below).

Visit the website, www.atalink.org to register (secure) and pay dues using separate cards if desired, or copy and send the registration form on page 32.

Frequent Answers:

- Member Rates: $245 by 22 Sep, 2400 EST; $275 by 22 Oct, 1700 EST; $315 Onsite
- The Member Rate is a member benefit. To register at the member rate, your membership must be current through at least November. The membership fee is non-refundable – even if you subsequently don’t attend FOR ANY REASON.
- VISA or MC or checks only (no AMEX, Discover, etc.) with card number, exp date, last 4 of your SSN, email address and signature. We currently cannot handle purchase orders or bank transfers.
- While our convention fees are extremely low, please bear in mind that partial registration is an attempt to accommodate those individuals who cannot attend the entire convention, e.g., the visiting associate who is in for the day, or an award-winner guest. Partially are not meant to reflect the cost for an individual event. Rather, they are a reduced convention-fee for that period of the convention that may include food. More than two partials can exceed the cost of full registration. You are usually much better off to pay full registration - particularly for accompanying spouses! Full registration is cheap: Please keep our fees in perspective.
- Full registration includes all events (except golf and your hotel).
- Use one form for a registrant and one non-member, social guest. Guests register at the member registration rate. If you have more than one guest, please contact ata@atalink.org for instructions. Banquet-only registrations are permitted. You can use a second card for the personal portion of a registration.
- Spouses who are A/TA members should complete separate forms.
- Members may receive the $245 early rate only if a completed form and full payment are postmarked or received by 22 Sep. CAUTION: You may have great difficulty getting through on 22 Sep because of others who also put it off. After 22 Sep, the higher $275 pre-convention rate will prevail – no exceptions. Incomplete forms OR payment will NOT qualify for early rate. Payment must accompany form, regardless of method of payment. On error, please do not send duplicate or “updated” forms. Call or email us with updated information.
- Postmark all mailed registrations NLT 15 Oct. No faxes/web/mail can be received after 1700 EST 22 Oct (office closed). We prefer no cover sheet for faxes. You may register at the A/TA registration desk upon arrival at the $315 on-site rate; however, banquet seating is not guaranteed.
- Send one form only. Do NOT fax THEN mail. Do not try to send payment one way and the form another.
- And no, you can’t pay now and send names later.

Hotel Reservations:

New this year: All HOTEL RESERVATIONS will be managed by the Association, Miles Wiley. Each installation has a room POC that units and individuals should contact for room assistance. If you are having difficulty determining who the contact is, please contact atarooms@cox.net. For exhibitors, the Association is working with a POC from each company on room requirements. If you do not fall into the above categories, you can attach the reservation form, found at http://atalink.org/Forms/RoomsRequest.xls, to an email and send to atarooms@cox.net; or send an email with your arrival date/time, departure date/time, the number of rooms requested, your name, SSN last-4, and your contact information (e-mail and commercial telephone number). If you have no email access, please call (703) 660-9627 and leave a message; or mail your request to Miles Wiley, 7803 Midday Lane, Alexandria, VA, 22306.

Convention Cancellation:

Cancellation Fees. $15 through 22 Sep; $25 through 22 Oct (1700 EST), $30 thereafter. (This includes changing charges from one card to another.) Refunds may be made based on your cancellation confirmation number, obtained after personal cancellation with Bud or Pam Traynor, prior to events, at (703) 385-2802 before 23 Oct; or at their hotel room; or from them at the A/TA registration booth (not hotel registration desk) via the switchboard (please no relayed requests or requests to other workers). Card refunds will be made back to your card; check payment will be refunded individually by check to each individual. Refund requests without a cancellation number will not be honored; so when you talk to Bud or Pam, be SURE to get one! We intend to make all refunds before year end. While refunds should be automatic, subsequent requests without a cancellation number will not be honored. You do not need to give a reason for your cancellation. Membership dues are never refundable.

Relaying your cancellation through an intermediary is too risky. If they forget to contact Bud or Pam, or they try to pass through yet another person – say a registration worker, or a board member who doesn’t follow through – the registrant is still responsible for full payment. The fees charged don’t cover minimum expenses for A/TA and there just isn’t extra money to cover someone’s error or lack of responsibility – no matter how important the TDY or family emergency. A/TA has less capability to be generous than the hotel and you know THEY charge for a no-show, regardless of the excuse. Make the effort personally; it’s the only way to be sure you won’t be stuck with the bill.

Membership:

Membership must be current through November to register at the member rate. The membership fee is non-refundable. When you log in, you will be shown what your membership dues status is. PLEASE, if
you wish to register at the member rate and need to pay dues, please, please do it with the registration form – even if you are paying for registration with a government/company card as you can use two different cards on the form. No need to first become a member; you can use two.

**Registration:**

Do not send a cover page and do NOT send a “corrected copy.” If you have a correction, just call or email us. Payment must always accompany the form, regardless of method of payment or form. Registration forms with checks MUST be mailed together. Mailing them up later is too time consuming and error generating. If you send a form via fax or mail or email, please do not send it a second way, or send twice. Everyone with a valid email address will be sent an email confirmation when the registration is processed. If you register online and do not immediately receive an email acknowledgement, presume you gave us a bad email address. Login again and check it.

Early registration ($245) is only an incentive to register early for administrative processing reasons – not just for early payment of the money. This means, for example, if you do not have the name of a registrant, you cannot just pay by the deadline and get an early rate. Similarly, if you want to register someone after the early registration deadline, you must pay the higher rate for the new person as appropriate. The canceled person will be reimbursed at the rate paid (less cancellation fee and dues, if applicable). If you choose to fax your registration form, recommend you not wait until the last day. If the fax machine or the web is too busy for you to get through, we will not receive your form “early,” and the higher pre-registration rate ($275) will apply.

To register at the member rate, membership must be current through November. The membership fee is non-refundable. Members may receive the early rate only if this completed form and full payment are postmarked or received by 22 Sep. Incomplete forms or incomplete payment do not qualify for early rate. Use one form for a registrant and non-member social guest; your guest registers at the non-member social guest rate. The canceled person will be reimbursed at the rate paid (less cancellation fee and dues, if applicable). If you choose to fax your registration form, recommend you not wait until the last day. If the fax machine or the web is too busy for you to get through, we will not receive your form “early,” and the higher pre-registration rate ($275) will apply.

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**No Substitutions**

There can be no substitutions. Individuals may be canceled and individuals may register. Specifically, no one may capture someone else’s early rate after the early deadline. We cannot “bank” funds. Remember a new registration must have all information supplied on a new form. Dues are neither transferable nor refundable to a person canceling. (See cancellation instructions above)

**GPC (the card previously know as IMPAC)**

We have been advised by AMC/CCX that CONVENTION REGISTRATION FEES CANNOT BE CHARGED TO THE GOVERNMENT PURCHASE CARD (GPC, FORMERLY IMPAC). THIS CHANGE WAS MADE PER SAF/AQC GUIDANCE AND SHOULD BE FOLLOWED BY ALL AIR FORCE PERSONNEL.” (Note: This prohibition does not refer to the Government Travel Card (GTC))

**Faxes:**

No fax cover sheet is necessary for membership or convention registration forms. Save your time and our paper; all arrive in a closed office. Cover sheets are immediately discarded. But if you do fax the form, do so only with credit card full payment for membership and registration. Please do not send a fax with the intention of mailing a check. Faxes arriving without payment will likely be discarded.

No faxes/web after 1700 EST 22 Oct. You may register at the A/TA registration desk upon arrival at the on-site rate.

**Exhibitors:**

There is usually some confusion. The Exhibit-floor-only rate is meant to cover the food events in the exhibit hall for the exhibit workers who are not generally participating in the social events. As a paid-booth-space benefit, each exhibit, regardless of size, gets 3 certificates that can be used in lieu of money for an Exhibit-floor-only registration. This allows some exhibitors to operate on a slightly tighter budget. This certificate cannot, however, be used as partial payment toward anything else. In practice, most exhibitors just pay normal registration so they can attend all events. Please see [http://www.atalink.org/exhibitors.html](http://www.atalink.org/exhibitors.html).

**Banquet Seating:**

Along with your Association’s popularity comes complexity. In recent years, we have tripled the number of folks attending the Tuesday night banquet. What that means is that we continue to push the capacity of our banquet seating and our ability to assign specific seats. To manage the process, we have instituted some procedures to maximize the service to all who wish to attend this superb event. Key to this is that you make your seating preferences known early in addition to registering for the convention.

**Pre-Convention Banquet Seating Sign-up:** We will take seating requests starting 30 July. Please download the seating request form at [http://www.atalink.org/Forms/SeatingRequest.xls](http://www.atalink.org/Forms/SeatingRequest.xls) and send it via email to Bob Ford at robert.g.ford2@boeing.com or bobford01@comcast.net. Please provide the last four of your SSN to aid us in matching you up with your paid registration, as well as your real first and last names, the one you used on your convention registration. Questions? Call Bob at 703-465-3420.

Your banquet sign-up date (priority in seating) will be based on when your banquet seating reservation is made. While you are invited to request seating at any time, your banquet sign-up date will be established when payment is received. And while we will take seating requests from anybody – Chapters, Units, Groups, or Individuals – the preferred solution is to get block inputs, so please check with your respective chapter/unit reps so your name is only submitted once.

For the chapters/units/groups, that means all seats you submit for your group must have a paid A/TA registration. Without it, that individual will be “bumped” from the chapter/unit/group seating request. Remember the priority: FIRST SIGNED-UP, FIRST SEATED!

Email submission cutoff for seating requests will be 1700, 22 October.

**Award Winners** will be seated as a group with one spouse/guest. Special guests/family may be seated at tables nearby providing Award Winners inform Bob Ford using the request form mentioned above.

**On-Site Banquet Seating Sign-up:** We will try to accommodate everyone, however; preferred Banquet Seating cannot be guaranteed onsite. The Banquet Seating Sign-up, which will be located next to the A/TA Registration desk, will be open Sunday and Monday the 29th and 30th of October, from 0900 – 1800. The CUTOFF for onsite banquet seating will be 1800, Monday the 30th. Those arriving Tuesday without prior seating coordination will be not be given a seating preference option.

Prior to the Banquet, in-progress seating charts will be posted daily about noon in the Banquet Seating Sign-Up Area. A final Banquet seating chart should be posted 1800, Tuesday, 31 Oct. If you have paid for the Banquet and have not shown up on the seating chart, you will be seated at non-assigned tables, perhaps in an adjoining room.

- **NOTE:** Should banquet sign-up exceed facility capacity, Banquet Registration may be stopped and the 1800 Monday banquet seating-cutoff date may be moved earlier. Check the A/TA web site or the A/TA Sign-up Booth for the most current information.

**PLEASE REGISTER ON-LINE IF POSSIBLE**

For the latest information, please visit: [http://atalink.org](http://atalink.org) and click on the “Convention” tab.
C-5 Marks Milestone 38 Years After Its Maiden Flight
by Laura McGowan, Aeronautical Systems Center Public Affairs

Thirty-eight years after the C-5 Galaxy made its maiden flight on June 30, 1968, it marks another significant milestone. At Dobbins Air Reserve Base, Ga., on Monday, June 19, the upgraded C-5M made its first flight right on schedule.

A modernized version of the C-5 Galaxy, known as the C-5M, made its maiden flight at Dobbins Air Reserve Base, Ga., on Monday, June 19. Upgrades to the venerable air lifter include new, more powerful engines; a modern cockpit with a digital, all weather flight control system, a new communications suite and enhanced navigation and safety equipment. (Lockheed Martin photo)

A rollout ceremony for the first of 111 C-5Ms was held at the Marietta plant on May 16. The modernization promised a more powerful, yet quieter airplane.

“It’s a big day for the Air Force, Air Mobility Command and the C-5 team. The C-5M will save more than $20 billion. It pays for itself and then some,” said Col. Kevin Keck, commander of the Aeronautical Systems Center’s C-5 Systems Group.

The C-5 Systems Group oversees the aircraft’s modernization process and supports the Air Force’s modernization priorities while cutting costs.

KC-135 to Celebrate 50 Years of Flying

The Air Force will celebrate the 50th anniversary of the KC-135 Stratotanker at Tinker Air Force Base, OK, on 8 and 9 September.


C-17A Used to Break Another Record with AirLaunch in DARPA/Air Force Falcon Small Launch Vehicle Program

A government/industry team from AirLaunch LLC, the Air Force Flight Test Center, and DARPA, using a C-17 from the 62nd Airlift Wing, broke records on 26 July for the largest single object to be dropped from a C-17 as a full-scale simulated AirLaunch QuickReach™ rocket weighing 72,000 pounds was dropped as part of the DARPA/Air Force Falcon Small Launch Vehicle (SLV) Program.

The team broke their own record set just over a month ago when a simulated QuickReach(TM) rocket that weighed 65,000 pounds was dropped out of a C-17 on 14 June.

“When we learned in June that we may have another aircraft available in as short as a month, the entire team put in extra effort to make this drop test happen,” said Debra Facktor Lepore, president of AirLaunch LLC. “We were particularly excited to use a C-17 borrowed from McChord Air Force Base, located near AirLaunch’s Seattle area headquarters, to support the test flown by the Air Force Flight Test Center at Edwards Air Force Base.”

The drop was third in a series of envelope expansion tests to verify the ability of the C-17 to safely deliver AirLaunch’s full-scale, full-weight QuickReach(TM) rocket to its operational launch altitude. Each test set a new C-17 record for the longest and heaviest single items dropped from the aircraft.

“The team has now flown three drop tests, using three separate C-17 aircraft, demonstrating that any C-17 can be used for AirLaunch drops and ultimately for our QuickReach™ launches,” said Lepore. “This test also leads to a new spacelift role for the C-17 – the aircraft can deliver troops and humanitarian aid one day and launch a satellite the next.”

At 65.8 feet in length and a weight of 72,000 pounds, the simulated QuickReach™ drop test article matches the characteristics of an operational rocket. The unmodified C-17A aircraft released the test article at the operational launch altitude of 32,000 feet, with a true air speed of 330 knots.

The Falcon SLV program goal is to develop a vehicle that can launch a 1,000 pound satellite to Low Earth Orbit (LEO) for less than $5 million, within 24 hours of notice. AirLaunch achieves responsiveness by launching from altitude from an unmodified C-17A or other cargo aircraft.
"Air Bridge" Helps Evacuate Americans From Lebanon

As approximately 1,800 U.S. citizens passed through Ramstein Air Base, Germany, via Air Force aircraft, the U.S. ambassador to Germany paid a visit to meet the transient Americans and to give thanks to the Airmen providing support. “My hat’s off, first of all, to General Hobbs and all the people that work with him, but also to every single Airmen and person involved in the military. They’re all just putting their shoulders to the wheel for our American citizens in distress. This is a wonderful example of how we take care of each other,” said the Honorable William R. Timken, Jr., as he visited the dislocated U.S. citizens at the Ramstein passenger service terminal where they had been flown by a C-17 Globemaster III from Cyprus.

After a few hours stay at Ramstein, the citizens continued on aboard the same aircraft to their final destination in the United States.

The citizens were fleeing Lebanon, where the conflict between Israel and Lebanon placed the lives of U.S. citizens in danger. The U.S. Air Force joined a multinational effort to help expatriates flee the country. By July 22, 19 C-17s had arrived at Ramstein, transporting more than 1,800 U.S. citizens.

Ready to Respond Early

On 18 July a team of four Airmen from the 352nd Special Operations Group from Royal Air Force Mildenhall, England arrived in Cyprus to handle the assisted departure of American citizens arriving on the island from Lebanon. The team was immediately dispatched to the Larnaka Airport to begin receiving the Americans and treat patients in need of medical care. The Cypriot Airport, which is one of the several departure points on the island, served as a landing point for Air Force MH-53 Pave Low helicopters also assigned to the 352nd SOG and Marine CH-63 Sea Stallions transporting Americans directly from Beirut. Besides serving as a landing point, the airport is also being used as a transition point for people coming into the country before departing for the United States.

“We were the first guys in here,” said Maj. (Dr.) John McBeth, 352nd Operations Support Squadron. “We were it.”

Working with minimal resources, the four-person crew began forging relationships with airport and embassy officials in an effort to ensure a smooth transition once people started arriving. The process of receiving the departing American citizens who appeared nervous and fatigued began immediately.

Meanwhile Airmen on the East Coast were ready to deploy on 19 July, shortly after the Air Force announced it would help in the effort to get American citizens out of Lebanon. A group of airmen from one of three contingency response groups at McGuire AFB, NJ, were ready to deploy when needed. The group’s equipment was packed and “sitting on the tarmac” on the base flightline ready for quick upload into transport aircraft, C-17s Globemaster III, that using aerial refueling, could fly from the East Coast base directly to most locations in the Middle East.

On 19 July Pentagon officials were not sure where the group would be going, but it seemed likely that the rapid-response group would deploy to the Mediterranean island of Cyprus, where a U.S. military communications team had already been sent, and Marine Corps helicopters had been transferring Americans.

“Air Bridge” Quickly Fully Operational

By 22 July air mobility airmen had established, and were running a fully operational two-way airbridge between the US, Ramstein AB, Germany, Larnaka, Cyprus and Incirlik Air Base, Turkey – cargo holds full of water, Meals-Ready-to-Eat (MREs), blankets and cots were arriving in Larnaka, Cyprus, and Americans were on their way back to the US via Ramstein AB, Germany. By 23 July more than 7,000 Americans had departed Beirut, Lebanon for ports and airports in Cyprus.

Two C-130 Hercules crews assigned to the 386th Air Expeditionary Wing delivered more than 10 tons of food and other relief supplies early on, flying no-notice mission taskings delivered by the U.S. Central Command Air Forces’ Combined Air Operations Center. The missions were handed over to the wing’s “Bravo Alert” crews which sit standby everyday to support emergency airlift requests.

“The lightning response of the 386th to swiftly deploy a C-130 allowed CENTCOM and USAFE teams to quickly assess the ground requirements in Cyprus to assist Americans attempting to depart Lebanon,” said Col. Paul Curlett, 386th AEW commander. “(Our) C-130s helped set the stage for follow-on American assistance operations in response to the recent contingency in Lebanon.”

C-17 aircraft were diverted from other taskings to help with the humanitarian effort. C-17 crews from both the 816th and 817th Air Expeditionary Airlift Squadrons joined the “Air Bridge,” moving passengers and supplies.

When passengers finally began arriving back in the U.S., on 22 July, members of the 305 Air Mobility Wing at McGuire AFB, NJ, and the New Jersy state police were ready to assist them.

Effort Continues

One evacuee, 18-year-old Andrew Khoury, his parents and two brothers were in Lebanon on a family vacation. “It was pretty dangerous,” Mr. Khoury said. “The worst part was in the very beginning. We were afraid we wouldn’t get a spot on the boat. There were huge crowds, and everyone was fighting each other,” he added.

Members from the 305 Air Mobility Wing and New Jersey state police assist an American citizen from Lebanon off a C-17 Globemaster III on Monday, July 24, at McGuire Air Force Base, N.J. McGuire was providing humanitarian assistance for American citizens who were leaving Lebanon to return home due to fighting between the Israeli military and the militant group Hezbollah. More than an expected 1,000 Americans began arriving at McGuire on July 23. (U.S. Air Force photo by Denise Gould)

“We want to thank our troops and everyone for all they did,” added Mr. Khoury. “They got us home safely.”

“These U.S. citizens were caught in a war zone,” said Daniel Schneider of the Department of Health and Human Services. “This is one of the first times for a large group repatriation effort like this,” he said, “and the U.S. military has done a wonderful job through the entire effort.”

As of Monday, 24 July, a total of 12 C-17s had transported more than 1,200 evacuees to process through the base. Flights were expected throughout the week, until all Americans fleeing Lebanon were safely returned home.
A C-130 Hercules crew assigned to the 738th Expeditionary Airlift Squadron, in Southwest Asia, provided critical support to an Army operating location in Afghanistan on July 6 by airdropping essential supplies before a potential enemy attack.

Aircraft commander Capt. Travis Sjostedt and his crew just completed their last sortie during their 30-day forward deployment to Bagram Air Base, Afghanistan. But as the crew was preparing the aircraft to return to its main operating base, leaders at Bagram received a message from the theater’s combined air operations center that a forward operating base in Afghanistan was short of critical supplies.

According to CAOC officials, commanders at the forward operating base were concerned that Taliban forces were planning an imminent attack on their location. In order to defend their base, the forward commander requested that emergency supplies be delivered as quickly as possible.

The only option for CAOC controllers to get supplies to the base was by air drop. CAOC controllers knew Captain Sjostedt’s crew was still at Bagram, so they called the 455th Air Expeditionary Wing’s leadership to ask if the crew was able to support an emergency airdrop mission with only a limited amount of time left in its duty day.

“The navigator, 1st Lt. Justin Newton, went out to talk to our loadmasters to see if they could make it happen, and without delay they said yes” said Captain Sjostedt.

While personnel at Bagram were palletizing and rigging parachutes to more than eight tons of supplies destined for the forward base, Captain Sjostedt’s flight engineer and two loadmasters scrambled to configure the C-130 to upload and deploy the supplies while the pilots and navigator were planning the mission, flight routes and calculating the drop time. A process that normally takes two to three hours was compressed to less than one hour.

“Getting the aircraft ready in such a short time was definitely a challenge,” said flight engineer Tech. Sgt. Jonathan Ryal. “Our crew really ramped it up – perfectly.”

Lieutenant Newton spent most of his pre-mission planning coordinating with the local Bagram tactics shop.

“We had to coordinate a lot of things with the Army. Our approach to the drop zone, location of the drop zone, times for the drop,” he said. “We needed to make sure we were all on the same sheet. Any disconnects and we’d be exposing Soldiers to the enemy longer than necessary.”

With the cargo on board, the crew took off for its designated drop zone. Even while the crew was en route to the drop zone, it was making last-minute adjustments to the approach for the drop zone and preparing the cargo for air drop. In less than four hours from initial notification, with only one chance to make a pass at the drop zone, the crew dropped its 12 bundles of cargo within eight seconds of the scheduled time and within a few hundred feet of the target zone.

What made this mission more extraordinary, according to Lt. Col. William Summers, 738th EAS commander, was that the crew had little combat airdrop experience.

“We are sending out young crews every day to do complex missions with great success,” Colonel Summers said. “It validates the training these crews go through back home.”

When asked about their reaction to their impromptu mission, Capt. Sjostedt said “it is the most rewarding experience I’ve had as an aircrew member – being part of such an outstanding team effort and realizing that our success had immediate and vital impact to our guys on the ground.”

The crew’s efforts did not go unnoticed at the CAOC. Brig. Gen. Thomas M. Gisler Jr., director of mobility forces, praised the crew’s performance.

“There are some Americans on the ground today still in the fight because of what they accomplished,” he said.

The 738th EAS crew is preparing to rotate back to the 517th Airlift Squadron at Elmendorf Air Force Base, Alaska.

18th Af Welcomes New Command Master Sergeant

Chief Master Sgt. Brye McMillon, who celebrated his 25th year in the Air Force April 6, was recently assigned as the 18th Air Force’s new command chief.

While taking on the responsibilities of the command chief master sergeant for 18th Air Force, Chief McMillon serves as an advisor to his commander on health issues, welfare and morale of more than 42,600 enlisted personnel.

Chief McMillon’s role in the 18th Air Force includes the command’s 12 wings, two expeditionary mobility task forces, the Tanker Airlift Control Center and three stand-alone groups.
The 2006 convention is just around the corner and will be upon us before we know it. This year, there are some unique challenges we are facing and this article is focused on those matters. We recently met with the Orlando World Center staff to make sure preparations are moving forward as planned and everything is on track. This resort is a first-class operation and I am confident that you will enjoy your time there. Marriott Corporation continues to make major improvements to this property and you will observe a major construction project in progress that will significantly expand the convention center -- we will need the additional space when we return in 2010.

Each of our corporate members and prior exhibitors should have received the 2006 exhibitor’s package and supporting materials by now – if not, please contact me. As you are aware, the total available exhibit space is less than we had available last year and the demand for booth space is again very high. I am confident that we will be able to accommodate all who wish to purchase an exhibit space. However, the available space for our government (pro bono) exhibitors will be more challenging, but we will do everything possible to fit everyone in who wishes to exhibit -- please be patient while I work the floor plan.

One very important matter will need your attention: the set-up time for the exhibit hall will be compressed this year and will therefore require careful planning. The exhibit hall will not be available to us for set-up until 4:00 pm on Friday night, 27 October. This will require around-the-clock set-up operations to support the opening reception on Sunday evening. Paramount Convention Services will be sending a separate Exhibitor Package to each exhibitor in the next few weeks that will provide special instructions for shipping and set-up -- we will need your full support to make this compressed schedule work.

We are also going to try something new this year that will hopefully make preparations for our next convention much easier for all our exhibitors. A/TA will prepare a preliminary floor plan for the Gaylord Opryland Hotel in Nashville (site of our 2007 convention) and will provide it in advance to our known major exhibitors (four or more spaces) so you can choose next year’s space a full year in advance. I will schedule a few minutes for each exhibitor to reserve their preferred exhibit location (starting with the largest exhibitor and continuing in sequence based on exhibit space requested). This will allow the most time consuming planning activity to be done efficiently and will open the remaining spaces sooner for all the remaining exhibitors.

We are trying to make the exhibit process more user-friendly and if this works as intended, this should be a major improvement to the overall process – better for everyone.

Warm regards,
Bob Dawson, VP Industry Affairs

A/TA Corporate Members (as of 31 July 2006)
AAI Engineering Support Inc.
AAR Mobility Systems
ARINC
Armed Services Mutual Benefit Association
BAE Systems of North America
Bell Helicopter Textron Inc.
The Boeing Company
Booz Allen Hamilton
Bose Corporation
Butler Parachute Systems Group, Inc.
CAE
Capewell Components Company
Cessna Aircraft Company
Computer Sciences Corporation
Derco Aerospace, Inc.
DRS EW & Network Systems
DRS Training & Control Systems
Dyn Corp International
Dynamics Research Corporation
EADS North America
Engineered Support Systems, Inc.
Federal Express Corporation (FedEx)
Federated Software Group
Flightcom Corporation
FlightSafety International
FMC Technologies
GE - Aviation
Global Ground Support
Goodrich Corporation
Gulfstream Aerospace Corporation
Hamilton Sundstrand
Honeywell International Defense Avionics Systems
Kellstrom Industries Defense Aerospace Division
IBM
Jeppesen
L-3 Communications
Little Giant Ladders / Wing Enterprises
Lockheed Martin Corporation
McLane Advanced Technologies, LLC
Moog, Inc.
MTC Technologies
NAT Seattle Inc.
Northrop Grumman Corporation
Parker Aerospace
Phantom Products, Inc.
Pratt & Whitney / Military Engines
Quantum3D, Inc.
Raytheon Company
Rockwell Collins, Inc.
Rolls-Royce North America
SAIC
Sargent Fletcher, Inc
Snow Aviation International, Inc.
Smiths Aerospace
Spokane Industries, Inc.
Standard Aero Ltd.
Symetrics Industries, LLC
Systems & Processes Engineering Corp
Telephonics Corporation
Thales Training & Simulation
Thriane & Thrane
Tybrin
Volga Dnepr - Unique Air Cargo, Inc
Vought Aircraft Industries, Inc.
Wel-Fab, Inc., Collapsible Container Division
World Airways, Inc
Since 1992 Snow Aviation International, Inc. (SAI) has conducted a comprehensive analysis of the C-130A through early H models’ design evolutions, mission performance, maintenance histories and accident histories in all of their varied mission environments. The basic premise of the analysis effort, and of the subsequent engineering, modification, testing, demonstration and FAA certification activities, has been that Legacy C-130s can be structurally renewed and fitted with modern technology propulsion systems, enhanced aerodynamic features, and electrical power generation and distribution systems that can support modern avionics at a fraction of the cost of newbuild airframes, and with equal or superior mission performance and reliability results.

The genesis of the SAI C-130 modification program is based on the SAI team’s thousands of hours of flight time and maintenance supervision experience in both combat and special activities venues supported by years of engineering, maintenance and logistics experience. SAI has assembled a specialized team consisting of highly experienced aircraft design, production and operations professionals covering all phases of the aircraft industry and possessing extensive C-130 experience.

SAI’s is the only comprehensive development program that has evolved to meet the changing tactical operating requirements that are today’s mission challenges for the C-130 fleets. And, the SAI program is the only one that has taken advantage of all available modern technologies and pursued the development work required to insert the needed capabilities into the legacy C-130 fleets. No other affordable integrated modification program that will efficiently and safely meet the modern C-130 type requirements is anywhere on the horizon for those DoD or international C-130 operators that cannot afford new replacement aircraft such as the C-130J or A-400M.

The C-130 has accumulated a massive experience base covering its more than fifty year tenure in service. Armed with its version of that database, SAI and its collaborating partners have been able to exploit the unmatched and inherent capabilities of the aircraft by applying fundamental engineering skills and experience in an innovative way to the insertion and integration of proven current technology. The result is a menu of straightforward modifications to the basic C-130 platform that vastly expands its utility in today’s operating environments at comparatively modest costs.

To develop and demonstrate the integrity and the reliability of the modifications designed by SAI to be applied to the C-130, the company acquired a C-130A in 1992, and it was selectively disassembled, structurally refurbished and completely rewired. To meet its needs for a heavyweight testbed, SAI purchased a C-130E in 2005 and reconfigured it with a new eight bladed Hamilton Sundstrand NP2000 propeller system, enhanced aerodynamic control surfaces and new IS&S engine instrumentation for its current series of flight demonstrations.

The fundamental modification, basic to mitigating a principal historical weakness of the aircraft and to greatly expanding its capability, is a new “digital quality” electrical system. SAI has designed and developed such a system, installed it in its own C-130A, received an FAA Part 25 Supplemental Type Certificate, and accumulated a near flawless performance record for dispatch and mission reliability over hundreds of hours of flight time. An added benefit of the new electrical system has been a 40% across the board maintenance cost reduction. This new configuration will benefit all C-130 models.

Exploiting the precise power delivered by the new electrical system, SAI designed, installed a new “glass” cockpit that would not have been practical without the “digital quality” power delivered by the new SAI electrical system.

The successful performance of the new cockpit coupled with the flexibility of the new electrical system opened up the potential for the economic insertion of a full spectrum of other modern technologies to enable the upgraded Herks to meet mission requirements that no other platform could perform as effectively or affordably. SAI parlayed the flexibility created by its new structures and electrical system into a comprehensive menu of modifications and upgrades for the C-130 in its “M” model concept, assessed as technically feasible when it was presented to the USAF in 1996.

The C-130M design philosophy harnessed the parallel proliferations of capability enhancing off-the-shelf components, emerging technologies and well-established manufacturing, technology insertion and integration methods. Selective choosing among the options created by SAI’s development program enables defense forces around the world to tailor their expanding capabilities to meet the traditional and new mission requirements most important to them, while staying within their budgetary constraints.

**RECENT FLIGHT DEMONSTRATION ACTIVITIES:**

SAI has completed several demonstration contracts funded by OSD (AT&L) and DARPA to demonstrate some of its privately developed C-130 performance and operational capability enhancement features.

**Persistent Herk I:** A contract to demonstrate the feasibility of the addition of SAI designed wing Tip Tanks was completed through its study phase in July 2003. It confirmed the critical air flow patterns with an aircraft tufting program performed with the USAF 46th Test Wing. Better than anticipated take-off and climb improvements were initially indicated by completed wind tunnel tests using SAI designed aerodynamic wing tip tank models. Persistent Herk I provided the wind tunnel data, and the aircraft tufting data on baseline flights confirmed SAI’s initial projections and led to the full scale flight demonstration of tip tanks which followed.

**Persistent Herk II:** A contract for the full scale flight demonstration phase was completed in September 2004. The demonstration confirmed aerodynamic performance improvements in actual flight significantly better than the early projections. The in-
flight performance and flight test data reduction indicate a 20-25% increase in the Max. Coefficient of Lift and a reduction of 15 knots in the Clean Wing, Power-Off Stall Speed. Comprehensive data reduction and analysis was completed and a full report submitted to OSD ATL.

SAI C-130E Flying With NP2000 Propellers Installed

The work that has been accomplished in these two tip tank programs and the comprehensive engineering studies already completed, provide strong evidence that building on these two demonstration programs and combining their opportunity with increased power would yield very significant Short Takeoff and Landing (STOL) performance for the current C-130 legacy fleet while saving significant defense dollars.

Advanced Herk C-130 STOL Program: Snow recently completed for DARPA Phase 1A of a series of contracts designated as the Advanced Herk C-130 STOL Program. The first phase of this series was intended to demonstrate reduced takeoff and landing rolls, improved climb performance and reduction of the C-130 critical field length requirement to as low as 2,500 feet at mission weights. The Phase 1 program called for SAI to install and demonstrate four Hamilton Sundstrand NP2000 eight bladed propellers, Pratt & Whitney Canada PW306C fanjets on each wing at the external underslung fuel tank pylons, and the extended dorsal fin and increased surface area rudder necessary for the aerodynamic control of the increased power in critical engine failure situations. During the September 2005 FY06 Defense budget Congressional budget deliberations, several million dollars were cut from the contract funding and the DARPA budget, resulting in the elimination of funding for the turbofan portion of the program. With the funds that remained, SAI completed the installation of the four NP2000 propellers and the extended dorsal fin and enlarged rudder and flight demonstrated their effectiveness.

Initial results of the Phase 1A flight samplings of performance in the STOL program were: (1) 29% decrease in takeoff rolls at weights from 100,000 to 155,000 pounds, (2) increased after takeoff and at altitude climb rates and specific ranges, (3) benign stall characteristics similar to those of the standard C-130A thru C-130H, (4) reduced air minimum control speeds, (5) reduced noise levels by over 50%, both inside and outside of the aircraft, and (6) reduced vibration levels throughout the flight deck and cargo compartment. Snow Aviation is now under contract to demonstrate by the end of 2006 the lift-power STOL synergisms available to C-130/E/Hs from installation of functional tip tanks and the improved thrust from the NP2000s.

SAI Quick Reaction UAV Program: A contract to demonstrate the in-flight controlled launch and recovery of live surveillance UAVs from a C-130 was initiated in September 2004. The first phase of the flight tests were completed in April 2005 and demonstrated the successful launch of the UAV from the C-130 in flight and the feasibility of recovery. Subsequent phases will demonstrate the release, controlled flight and redocking and recovery of the UAV back into the C-130 in flight. Below are photographs of the mock-up UAV being tested in captive flight for stability and structural integrity as it is lowered through the turbulent air layer and a free flying UAV after launch from a C-130.

HIGHLIGHTS OF SAI’S C-130 UPGRADE CAPABILITIES

1. Snow Aviation International (SAI) is the only company in the world to have achieved US Federal Aviation Administration (FAA) certification for an electrical system for a modernized ex-military C-130A. That modified aircraft had a near flawless maintenance and schedule availability record in five years of supporting NASA and USAF test missions.

2. SAI’s C-130 comprehensive modernization proposal in 1996 for its C-130M (avionics, systems and structural upgrades, including a new wing) provided the intellectual basis and stimulus for the USAF’s C-130X program whose avionics component is now on contract with Boeing as C-130 AMP (Avionics Modernization Program).

3. SAI offers a family of cost-effective C-130 refurbishment and upgrade options ranging from basic A and B Model return to service and minor upgrades to comprehensive E and H Model advanced capability and mission upgrades, depending on the customer’s fleet, mission, and budget requirements. These include:

   • Comprehensive Structural Refurbishment. Center and outer wing repairs or replacements with redesigned wing structural components of modern fatigue and corrosion resistant materials, as well as fuselage and empennage structural repairs and subsystems modernization.

   • Electrical System Modernization and Rewiring. Control of the electrical system voltage levels and the elimination of the extreme legacy C-130 power transients critical for utilization of the new computer based systems being developed and operated in many areas of the world. SAI’s new electrical control system provides digital quality electrical power for this electrically dependent aircraft. The rewiring of aircraft over 15 years old is a prime reliability enhancement (and life cycle cost saver) which should accompany any avionics or cockpit modernization investment.

   • Cockpit Communication/Navigation Modernization. A full spectrum of cockpit upgrades, including advanced flat panel AMLCD display arrays incorporating HeadsUp Displays (HUDs) and full Night Vision (NVIS) compatibility. The design also features a Flight Management System, a color weather tactical radar with flight information displayed on the flat glass panels, and a communication and navigation equipment suite complaint with Global Air Traffic Management (GATM) and Reduced Vertical Separation (RVSM) air traffic control environments.

   • Cargo Capacity Expansion and Modernization. A fuselage extension to increase cubic capacity by up to 2 x 463L pallets over current configurations, and modernization of cargo handling and airdrop systems.

Mock Up UAV Insertion to Non-turbulent Air from C-130A

• Propulsion System and Performance Upgrades, A configuration that includes 8-bladed Hamilton Sundstrand NP2000 propellers that provide 29% additional takeoff thrust at brake release and Pratt & Whitney Canada PW150A engines in SAI designed nacelles that boost usable shaft horsepower 10% over the most powerful installation on C-130H/HJ, and improve fuel economy 20% over the current T56-A-15 Series engines.

All of the above work can be performed in the customer’s facilities, after prototyping/ first article engineering, installation and flight test is completed at SAI’s Columbus, Ohio facility with the participation of customer production personnel. SAI technical assistance to customer modification lines is an integral part of any SAI refurbishment/ modernization program, and SAI air and ground crew training and follow-on logistics support can also be arranged.
**2006 A/TA Convention & Symposium Registration Form**

**Registration & Cancellation Policy:** See detailed instructions on pages 22, 23 & 24 or on the web at [www.atalink.org](http://www.atalink.org)

a.) NO REFUNDS without a cancellation confirmation number, obtained after personal cancellation only with Bud or Pam Traynor, prior to events, at (703) 385-2802 or via the hotel switchboard in their room; or personally at the A/TA registration booth (not the hotel desk). **Please no intermediaries**. Email OK but risky. Requests without a cancellation number will not be honored. See cancellation fees below (bottom right).

b.) We prefer you instead register online with credit card (secure) at [www.atalink.org](http://www.atalink.org)

c.) Call or Email changes; DO NOT RESUBMIT FORM or send multiple copies. When in doubt, contact Bud or Pam Traynor: (703) 385-2802 or ata@atalink.org

### Registration Form

**FIRST NAME:** ________________________ **MI:** _______ **LAST NAME:** ________________________

**NATIONALITY** (If not US): ________________________

**SSN-Last 4:** ________________________ (Never listed nor given out - For data control only)

**HOME ADDRESS:**

- **CITY:** ________________________ **ST:** _______ **ZIP:** _______

**HOME E-MAIL:** ________________________

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**ORG NAME/SYMBOL:** ________________________ **BASE/LOCATION:** ________________________

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- **CITY:** ________________________ **ST:** _______ **ZIP:** _______

**WORK E-MAIL:** ________________________

**Spouse:**

- **FIRST NAME:** ________________________ **LAST NAME:** ________________________

### FULL REGISTRATION: (Includes everything except Hotel and Golf)

- **A/TA Membership** (Required for Member Rate for member and guest)
- **Member Early Registration** (Must postmark/fax by 22 Sep)
- **Member Pre-Registration** (Early above is $30 cheaper) (Onsite will be $315)
- **Non-Member Registration** (Probably NOT You – Join and Register Above)

Exhibiting Company: ________________________ Exhibit Floor Access Required

**GOLF (Includes Lunch):**

- Handicap(s): 2. _______ 3. _______ 4. _______

Foursome: 2. _______ 3. _______ 4. _______

**PARTIAL REGISTRATION:** All below included in full registration above – Full registrants please don’t use.

- **EXHIBIT FLOOR ONLY** (Does NOT include Hotel, Seminars, Banquet, Brunch or Golf)
- **Sunday Evening Reception** (Food, Refreshments & Exhibits)
- **Monday Program** (Seminars, Exhibits, Breakfast, Lunch)
- **Monday Evening Reception** (Food, Refreshments & Exhibits)
- **Tuesday Program** (Seminars, Exhibits, Breakfast, Lunch)
- **Tuesday Evening Cocktails and Banquet**
- **Wednesday Farewell Brunch**

### VISA or MASTERCARD ONLY (no AMEX, Discover, etc.)

By transmitting this form, I certify I have read and understand the cancellation instructions and that if my National membership is not current through Nov., an additional $40 will be assessed on this card to update my membership. Cancellation fee is $15 if by 22 Sep; $25 if by 22 Oct; $30 thereafter.

**AF or Org. Card #:** ___________ **Exp:** _______ **Amt:** _______

**Visa & MC Only**

**Personal Card #:** ___________ **Exp:** _______ **Amt:** _______

Signature (required):

**TOTAL AMOUNT DUE NOW:**

Make Checks Payable to: The Airlift/Tanker Association $_____

Check www.atalink.org for web registration – Otherwise copy this form and mail, along with check or credit card info to:

Col Dennis (Bud) Traynor, USAF (Ret)

9312 Convento Terrace, Fairfax, VA 22031

Credit card users may fax registration to:

(703) 385-2803 (no cover page please)

After 15 Oct mail or 22 Oct fax/web cutoff, registrations accepted only at the convention registration desk.