

intercom

Journal of the Air Force C4 community ☆ January 2004



DECISION SUPERIORITY EQUALS MISSION SUCCESS

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Letters to the editor

Safety first

I was reading an article in the November 2003 *intercom* titled Fiber Replaces Copper in Turkey. The picture on Page 32 is NOT a good example of how to insert a card on energized equipment. Second Lt. Dustin Johnson is showing the world a serious safety violation. He is wearing a gigantic ring on his hand, in fact the hand touching the card. Perhaps a correction to the article is in order, just to let the lower ranking people know that this is not proper procedure. Proper procedure is to remove ALL jewelry while working on electronic equipment.

— **Tech. Sgt Scott Pendell**
Scott AFB, Ill.

I recently read an issue of *intercom* to find out what is the latest and greatest in the C4 community. I was shocked to find a major safety violation being portrayed as proper electronics maintenance practices. Namely, 2nd Lt. Dustin Johnson installing a circuit card while wearing a ring. My career field is 2E0X1, and I have always learned that rings should be removed before handling any kind of electronic devices. I have learned to practice the highest level of safety to ensure myself and my equipment operate optimally. As you know, safety is a top priority for the Air Force, I trust it is a top priority for your publication as well. Please be more careful about improper portrayals of safe work standards in the future. In the hands of a troop new to electronics, that example could prove fatal.

— **Senior Airman Robert Metzler**
Tinker AFB, Okla.

On Page 32 of the November *intercom*, you have a picture of 2nd Lt. Dustin Johnson, 39th

Communications Squadron, installing a new fiber optic telephone card. It's a nice picture except for the big ring on his right hand in the middle of the picture.

Any maintainer who reads your publication will recognize that right away as a maintenance practice we harp on not doing everyday. In the future, I would suggest better editing of photos such as these.

— **Master Sgt. Kevin Kearby, USAFR**
March ARB, Calif.

Thanks to everyone who submitted comments about this major safety concern. From the flightline to the computer maintenance technician's workbench, safety should be everyone's top priority. The intercom staff should have caught this right away and quickly sent the photo to the cutting room floor. Sergeant Kearby hit the nail right on the head when he said we need to do a better job of editing these type of images.

On the topic of photos, remember that not only your stories, but your images as well need to go through your chain of command for review and approval. By working as a team, we can hopefully avoid an oversight like this in the future.

Thank you

I just want to pass on how great the *intercom* has developed over the years and lately, your efforts to get this out electronically as well. I've been a 2E comm troop for more than 21 years, and the *intercom* has been super keeping us informed of what's happening in the C&I world, so great job, and my thanks to the *intercom* staff.

— **Master Sgt. Richard Chavez-Hatton**
Vandenberg AFB, Calif.

JAG
in a Box

Fritz Mihelcic
AFCA Deputy
Chief Counsel



Medical SIPRNET

Are we allowed to put command and control, or C2, switches or SIPRNET in our military treatment facilities?

The Law of Armed Conflict, also known as LOAC, determines in large part what we can do in this area. Generally speaking, if you put a C2 switch into a hospital you may be taking away the protections afforded by the Geneva Convention.

Even if the switch is merely a back up unit, the fact that it is there and could be used may be enough for the facility to lose its protected status. The use of SIPRNET in medical facilities is also a hotly debated issue today. LOAC purists believe that any encrypted communications will put it at risk. A more moderate point on the spectrum would allow SIPRNET in medical facilities if its use was restricted solely to medical purposes. Of course, you might have a difficult time assuring the enemy of the "medical purpose only" use. Policy decisions in these areas are being formulated now.

If you encounter these issues, you should engage your local legal office or us at DSN 779-6060 or afca.ja@scott.af.mil for assistance.

Send in your question to:

AFCA-JA@scott.af.mil
or call DSN: 779-6060

air and space power in manned, unmanned employ find-decide-shoot-assess communications systems

By Lt. Gen. Tom Hobbins
HQ USAF/XI

PENTAGON — Our role in Air Force Warfighting Integration, or XI, is to provide an improved C4ISR domain that supports all aspects of the mission. We want to make sure we don't lose track of the most critical measure of success, which is how well we employ air and space power to achieve effects in the joint battlespace using manned, unmanned, and space systems.

We want to exploit the kill chain to find, decide, and shoot faster than any adversary. That means as the Air Force performs "find-decide-shoot-assess" activities in the kill chain, the information should flow based on a single, overarching architecture that anticipates what the subscriber needs and constantly looks for it, makes adjustments, learns, and gets smarter and more efficient every day.

The Air Force and the other Services orchestrate a wide range of capabilities and systems to achieve decision superiority and air and space dominance for the Joint Force Commander, and they do that in a complex environment made up of air, space, and ground systems. **Key to the Air Force concept is the capability to rapidly bring globally based forces to a specific**

point to create the Combatant Commander's desired effects. This concept means that the Air Force must have a globally based command and control system to provide commanders information and allow them to direct forces and apply our wide array of warfighting capabilities to the Joint Battlespace.

The Joint Battlespace, ground, air and space environment, is more than platforms. The critical element that permits the systems to operate together is what we call the C2 Constellation.

The Constellation Net is the communications network—air, space, and terrestrial—that must allow a free flow of information so that it is rapidly accessible and presented to warfighters at the right time and right place to create the commander's desired effects.

This Constellation Net:

- ▶ ties together information generated from a complex array of sensors—air, space, and surface;
- ▶ processes and delivers information; and
- ▶ presents the information to the warfighter.

Communicating freely may sound easy, but right now information flow is largely point-to-point. It works on the same principle as sending e-mail to another individual, or calling them on the phone. However, air and space forces need to communicate more like a chat room, or a teleconferencing call

DECISI

Unmanned & space systems assess activities in the kill chain Systems must be global for the Joint Battlespace

so all players have the information simultaneously. We need an environment in which machines communicate directly with each other to exchange data, and when new data of demonstrated interest comes in, it pushes that data based on known subscriber interests, thereby freeing the commander to focus on understanding the information and making decisions.

The Air Force needs an Internet that allows information to flow among air, space, and ground elements. The information needs to be honed to decision quality for the command chain. The separation of control of information from command of forces allows the commander to focus on the art of command, leaving the science of controlling and manipulating information to the supporting staffs.

Ultimately, this Internet requirement will entail:

- ▶▶ Mobile Internet Protocols, publish-subscribe, access by all to all information;

- ▶▶ some collaboration across industry at a strategic level to work the machine-to-machine interoperability of C4ISR systems; and

- ▶▶ designing systems for interoperability.

That's the vision, the Chief of Staff of the Air Force vision. It's been uppermost in the minds of senior command leaders. We've formed panels on

Predictive Battlespace Awareness, Effects Based Operations, Network Operations, and Early Industry Involvements. They are spot on to:

- ▶▶ address capability shortfalls and enablers from our concepts of operations and give the staff a system to prioritize multiple CONOPS' capabilities;

- ▶▶ underscore C4ISR transformational opportunities for immediate implementation;

- ▶▶ prioritize air and space capabilities for the Combatant Commander's Joint Force ... we'll be looking for specific recommendations for programs and tactics, techniques, and procedures;

- ▶▶ provide inputs for further CONOPS development;

- ▶▶ bring views and concerns of industry partners early into the process; and

- ▶▶ give our staffs recommendations for action in the upcoming fiscal year 2006 POM Builds.

Bottom line, the Air Force goal is reducing the cycle time of the kill chain to single digit minutes using a joint-coalition-interoperable command and

BOTTOM LINE

We are in the business of working Information Technology to triumph in our nation's wars.

control system.

We have a lot of work to do. We must strive to execute the kill chain with fewer people, reduced system maintenance requirements, a smaller footprint, and less bandwidth.

We need to exploit non-traditional ISR assets for opportunities to rapidly provide decision-quality information to the combatant commander in minutes, not hours.

From inception this process must be joint. **Time sensitive targets must be shared, distributed and integrated horizontally to one and all simultaneously.** The combatant commander must be able to make a rapid decision when a new target emerges and to act decisively to ensure the target is destroyed and effects achieved.

We are in the business of working Information Technology to triumph in our nation's wars. So when the world calls, when the nation calls, air and space forces will be there ... to dominate the battlespace ... ready, with the skills and capabilities to find, fix, track, target, engage and assess anything of significance on the face of the earth ... to track down terrorists, one at a time, if that is required.

We'll be there beside soldiers, Marines, and sailors to bring our forces victory with minimal exposure to harm. To keep ours, the best-led, best-trained Air Force on earth.

ION SUPERIORITY



tips to Bandwidth

419

it's not a roll of the dice

Air Force leaders frequently ask if a specific user group or operational facility has enough bandwidth to carry out its mission. To provide a sound answer, analysts must understand the using community and consider several technical and non-technical factors.

Determining the Need -

Required network bandwidth is derived from user expectations for screen updates, file downloads, and multimedia quality. Unfortunately for network providers, users are coming to expect instant screen updates, CD-quality sound, and high-definition video that are difficult to ensure, especially at deployed sites. Bandwidth-intense applications also drive the need. Translating demand to a number of bits per second is not an exact science; in some respects it's more of an art. But despite its difficulty, a needs determination is the first step to analyzing bandwidth sufficiency. Beyond requirements, several more factors must be considered.

Protocol Overhead - Network

Network protocols consume an amount of bandwidth that is unavailable for payload; hence overhead. The ratio of protocol overhead to user data varies for different network protocols and applications. To gauge overhead, it's important to understand how applications rely on the network, as well as the network transmission protocols used, and the network topology.

Compression -

Compression techniques reduce file sizes and therefore consume less bandwidth. Ideally, all information would be compressed before transmission, but different compression and decompression processes add delay that may or may not be acceptable to users.

estimating sufficiency

Network Design and Configuration - Several network design options impact performance. Part of an efficient network design may include Internet proxy servers that locally store commonly-referenced Web content; load sharing that distributes traffic over multiple paths; and switched networks to avoid packet collisions. Additional software configuration can allocate/restrict bandwidth, permit/block traffic, and ensure quality of service. Other devices such as firewalls add security, but introduce overhead and delay.

Network Availability - It's important to recognize even infinite bandwidth is not a fix for an unavailable network. Concepts such as diverse/alternate routing, backup power and fault-tolerant components contribute to network availability.

Physical Delays and Technical Limitations - Several types of delay affect network performance. Propagation delay depends solely on distance, so no amount of bandwidth can overcome it. Other types of delay result from buffering, packet re-assembly, content filtering, and encryption. Technical limitations also exist, and demand obviously can't exceed what's technically possible.

Surge Capacity and Future Requirements - After accounting for all the previous factors, network design must address surge capacity and future requirements. Planning for maximum surge capacity may not be cost effective in most situations. Future requirements are also difficult to estimate and require a measure of visionary thinking.

Rules of Engagement for Network Use - Functional managers and network providers must set rules to ensure network use complies with technical, political, and other constraints. Left unregulated, large e-mail attachments, large file downloads, and streaming media can degrade the performance of other applications. ROEs add a measure of predictability and control to network use and bandwidth consumption.

Putting It All Together - It's important for those who both ask and answer the bandwidth sufficiency question to understand the many factors involved in providing a qualified answer. Estimating bandwidth sufficiency for a given user community or operational facility is complicated. The exercise of considering all the factors to formulate a bandwidth number requires time and research and unfortunately a large measure of "it depends."

Decision Superiority requires a

clear

By Capt. Sandra Griffin

367th Training Support Squadron

HILL AIR FORCE BASE, Utah — Global media, surveillance systems, and virtual environments are commonplace in U.S. Air Force training scenarios and real combat situations.

But what should commanders do to make sure their decisions are the right ones and superior to their adversaries?

Professional military education teaches a commonly used model of decision-making known as the OODA loop. The acronym stands for observe, orient, decide and act. Col. John Boyd developed this model from his research on why American fighter pilots continually won dog fights against their adversaries, even though the adversaries' fighter jets were superior to American jets. Colonel Boyd deduced that American pilots had better visual perspective in the cockpit to observe the adversary's position and as a result were able to orient to engage, decide on the action and then engage faster.

The key factor was the time gained in being able to make the visual contact earlier than the adversary. The ability to observe is paramount. **The pilots used the clear canopy to observe the enemy fighters better and avert danger.** Just being able to see the enemy faster saved their lives. Having a clear canopy that is observing the battle space has great implications.

That's where visual information comes in, ensuring commanders have a full and unobstructed view, a clear canopy, may be the most important tool in the commander's decision-making toolbox.

As a communications officer, I was afforded the opportunity to study the impact of visual information on Air Force commander's decision-making process during an AFIT tour. The result of my study was an emerging theory called the clear canopy. This theory states that motion imagery, which is visual information containing video and audio communication,

enhances the ability to expedite the OODA loop. It effectively gives Air Force commanders an edge for decision-making. Motion imagery enhances the ability to expedite the OODA loop by: ► providing a clearer picture of the battle space during observation phase; ► approving or disproving mental images the commander might have about a particular incident (previous experience, genetic heritage, and cultural traditions) commanders might have in the orientation stage by comparing imagery to his/her previous mental images; ► validating and challenging a pending decision if subsequent imagery is obtained during the decision phase; ► and offering concrete feedback after action has been taken.

Motion imagery can provide the evidence that a decision was the right one or show the result of a bad one.

However, three conditions must be met to have decision superiority. First of all, imagery should be accessible to the commander — the right commander. Lower level commanders retaining imagery at their level of command obstruct the canopy and cripple the decision-making process. Also, massive amounts of imagery, or rather unedited imagery, hamper decision making. Too much imagery, as in the recent case of streaming video from unmanned aerial vehicles clutters the view as to what is most important in the moment. Distant peer commanders outside the realm of operations viewing the same footage could clutter the clear canopy needed for the primary commander, just as two pilots cannot pilot a fighter jet.

Secondly, accuracy of imagery is another condition in obtaining a clear canopy. The best-trained cameraman holding the latest and greatest equipment does not necessarily mean the imagery obtained is meaningful. Decision-quality imagery means getting to know and understand what a commander needs and delivering quality products.

Finally, timeliness of images is critical to begin the decision-making process. Satellite technology greatly

Canopy



reduced the delivery time from weeks in Vietnam to seconds during conflicts beginning with Operation Desert Storm. Technology is only a part of the solution; command structures beginning at the camera-man must be able to move imagery as fast as possible.

What about embedded media? Commercial media companies provide a substantial amount of imagery during conflicts when they have access to particular missions. However, the media footage may or may not become available to the Air Force after the media outlets' immediate needs of broadcasting footage real-time or recording live-to-tape for editing at a later date are met. Depending on the media outlets' beliefs about what is suitable viewing for the American public, most of the disturbing images are screened out. Use of this screened footage and the time delay can render these acquisitions useless for the commanders' decision-making process.

What is the cost of not having decision superiority?

Providing a clear canopy through accessible, accurate and timely motion imagery can enhance commanders' ability to move through the OODA loop faster and possibly stave off defeat. Consequences of not using motion imagery would include latent decision-making, hampered decision-making or ineffective decision-making.

Any of those three consequences might result in loss of resources, failed mission and perhaps ultimately loss of life.

Motion imagery can be more than the "eyes and ears" of the commander. It can win wars and save lives.

BOTTOM LINE

Visual information helps commanders have a clear canopy in which they can see the enemy and make time-critical decisions.

Super Fast-CD

Using right tools for the right decision

By Maj. Dean Finley

Air Force Agency for Modeling & Simulation

ORLANDO, Fla. — Combatant commanders, and their staffs require rapid collateral damage estimation tools to support effective combat planning and execution and mitigation of potential damage to civilian personnel and facilities.

Development of Super Fast Assessment Strike Tool-Collateral Damage or Super FAST-CD, and its predecessor, FAST-CD, grew from this critical warfighter need.

In both Operations Desert Storm and Allied Force, existing CDE tools were often found to be either too slow to meet the required engagement decision timeline or overly pessimistic with regards to the expected collateral damage. These shortfalls significantly limited combatant and component commanders' target engagement options and diminished the overall lethality and responsiveness of U.S. and coalition forces. As a result of these shortfalls, development of FAST-CD was begun to provide an improved, field-level, CDE tool to support combatant and component commanders.

Initially fielded during Operation Enduring Freedom, FAST-CD was the most widely used CDE tool during Operation Iraqi Freedom. It was used to support both pre-hostility planning and around the clock operations, averaging 1,700 per day, to include 156 missions executed against Time-Sensitive Targets and 686 missions executed as dynamic targets with re-tasked aircraft.

FAST-CD clearly demonstrated its utility during recent combat operations. It is currently in use by combatant commands and components, joint analysis and intelligence centers, service warfare and analysis centers, service and joint targeting schools, national targeting agencies and organizations, weapons development agencies and tactical units. However, further enhancements are needed to improve FAST-CD's utility in supporting combat operations. Super FAST-CD will provide those enhancements.

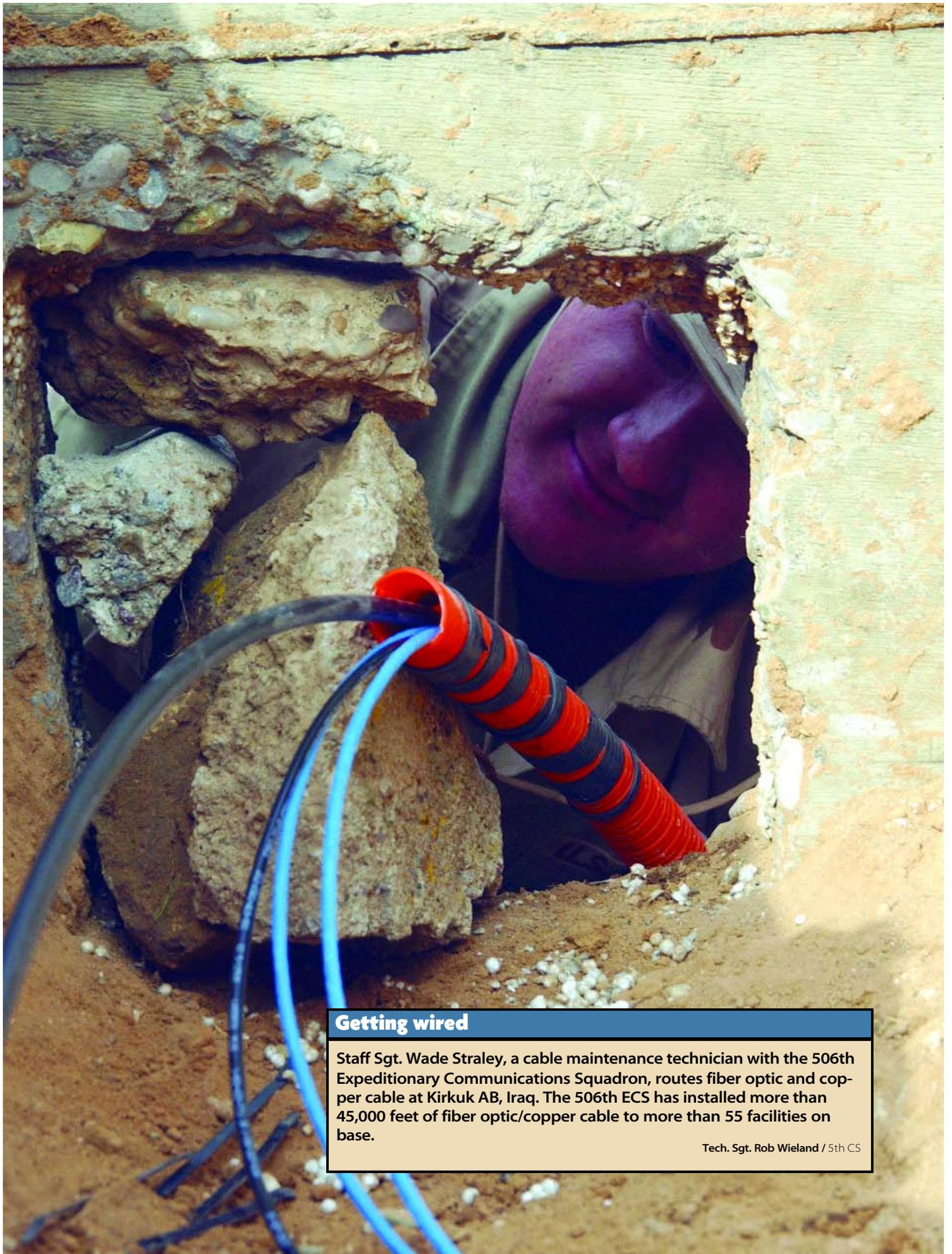
Development of Super FAST-CD is sponsored by the Air Force Agency for Modeling and Simulation and is being funded through the Office of the Secretary of Defense's Live Fire Test and Training. Super FAST-CD will address the current limitations of FAST-CD and provide an improved CDE tool that is faster and more accurate. It will provide a more responsive decision support tool, which will allow commanders and staffs to more effectively:

- ▶▶ Analyze and mitigate potential collateral damage;
- ▶▶ Engage TCTs; and
- ▶▶ Use precision guided munitions against targets in or near protected zones.

Super FAST-CD is the next step in providing improved CDE decision support tools to our combatant and component commanders and staffs. It will directly impact the warfighter's ability to compress the kill chain timeline, ensuring greater lethality while providing greater protection to non-combatants and civilian facilities and protected areas.

BOTTOM LINE

Super FAST-CD technology provided commanders with rapid collateral damage estimation.



Getting wired

Staff Sgt. Wade Straley, a cable maintenance technician with the 506th Expeditionary Communications Squadron, routes fiber optic and copper cable at Kirkuk AB, Iraq. The 506th ECS has installed more than 45,000 feet of fiber optic/copper cable to more than 55 facilities on base.

Tech. Sgt. Rob Wieland / 5th CS

TRANSFORMATION

is anticipating where the puck will be ... and then being there



By Lt. Col. Ted Dimitt
4th Air Force / SC

It's important we discuss our role as comm and info professionals, and how we contribute to the big picture, as we continue to transform. That's because transformation is redefining standards for military successes by accomplishing military missions that were previously unimaginable or impossible, except at prohibitive risk or cost. We, in the C&I business, are right at the heart of transformation. This is not a one-time event, but a continuing, long-term process that defines us as the most powerful air and space force in the world. We have always been engaged in some form of transformation, but two very important events in our history really defined transformation needs: the end of the Cold War, and the evolving War on Terrorism following the events of Sept. 11, 2001.

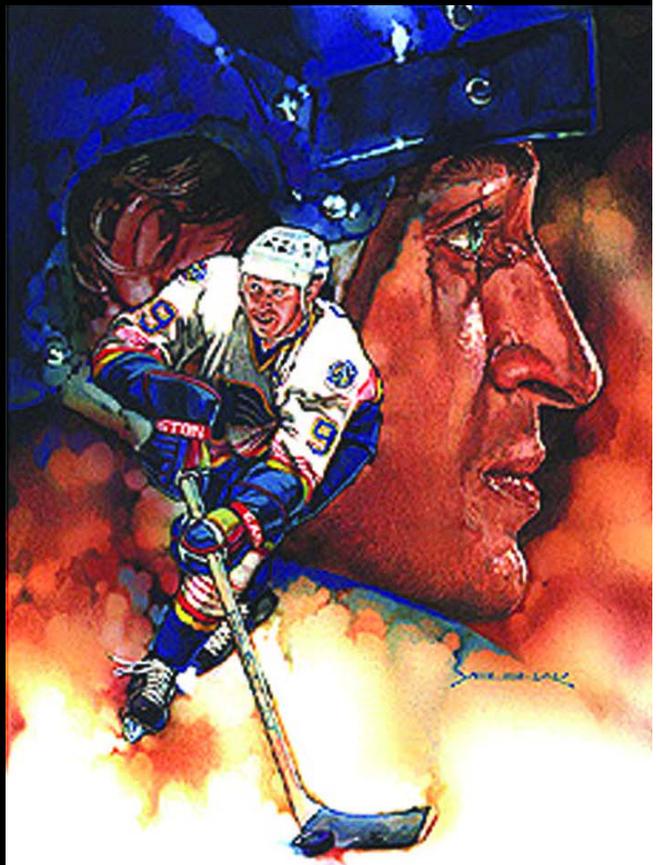
Transformation is also driving our evolution from an industrial-based to an information-based society. Within the C&I community, we need to change the way we think, the way we operate, the way we share information and information resources and the way we interact with our customers. This involves new technologies, new concepts, using existing capabilities differently and changes in doctrine and tactics.

To continue to operate from a position of overwhelming military advantage, we must transform how we fight, how we do business and how we work with other agencies and multinational partners. The events of Sept. 11 brought to the forefront the need for homeland security, the need for enhanced coordination and communication capabilities and the need for information sharing with other federal agencies as well as state and local authorities.

Information must be an enterprise resource for successful joint, coalition and alliance war fighting. We are in the business of providing the right information, at the right time, in the right format, to the warfighter. Information superiority is one of our core competencies, a key element of transformation, and is critical to our emerging, light and lethal expeditionary force. It's also pivotal to time critical targeting, provided through robust communications, automated decision tools and data links and a shared information environment, to minimize the time from sensor detection to shooter.

Hockey great Wayne Gretzky was never known as being exceptionally fast, but he possessed the ability to anticipate, to know where the puck was going to be, and to be there. We manage a valuable wartime resource. Speed and accessibility of information is vital, but also, like Mr. Gretzky, we need to know where the puck is going to be, and to be there.

Point
of View



Art by Andrew Yelenak

Hockey great Wayne Gretzky wasn't known for being fast, but he possessed the ability to know where the puck was going to be. So do we.

Network success

Common standards will ensure decision makers are plugged in

By 1st Lt. Cheo Stallworth
AFC2ISR/SCY

A Seamless Warfighter's Network was the focus of Air Force Chief of Staff Gen. John Jumper's speech at the 2002 C4ISR Summit.

One year later, General Jumper's vision of Network Centric Warfare is becoming a reality. This year's C4ISR Summit, themed Transforming C4ISR into Decision Superiority, was highlighted by four panels: effects based operations, predictive battle-space awareness, network operations and the industry perspective on bringing it all together.

The network operations panel addressed four main areas. The first was the need for machines to have common protocols to pass information quickly. Known as machine-to-machine interface, this interoperability drives the warfighter toward defining a set of information exchange requirements based on common standards and protocols. Due to the acquisition processes of the past, today's warfighters fail to share information among different communities of interest in the battlespace.

The second focus area addressed the Global Information Grid and the need for expanded data throughput necessary to pass information. GIG is the foundation layer supporting all Department of Defense, national security and related intelligence community information requirements. **Integrating systems and networks into a unified global system of systems, makes it easier for authorized users to gain access to information, thus enabling dominant battle space knowledge and decision superiority.**

In addition to the GIG, Transformational

Communications plays a large role in providing additional throughput to the warfighter.

TC will deliver multi-spectral radio frequency and optical functionality providing the capability to crossband among these spectra and crosslink between satellite constellations. TC addresses the space backbone that provides much of the intra-theater and the inter-theater connectivity that warfighters depend on.

The third focus area, airborne network, addressed providing the airborne subscribers with core communications services. **IP-based protocols offer the best option for expanding the capabilities of today's network for the warfighter.**

It is the most mature of all protocols for routing and transmitting data to a large community or sub-community of users. The next-generation protocol, IPv6, provides expanded capability from today's Internet by increasing the number of available addresses. This will become the global standard during the next few years, and will provide the foundation for the development of a common protocol for the warfighter's needs.

The last focus area identified networked sensors as a means to increase situational awareness typically used by the warfighter. Information deemed useful is radioed to the decision makers on the ground. Those decision makers, after verifying with others, then give the go-ahead to the warfighter to engage targets. This process is known as clue, cue, correlate, and fuse, and could take many minutes to complete. Progressing in the improvement of clue, cue, correlate, and fuse, will improve timeliness, increase accuracy and protect crews and assets by building a more accurate picture.

Tomorrow's network will be based on common standards to ensure the warfighter's needs are met while keeping the full range of investment options available to achieve the capabilities needed.



Multimedia in USAFLE



Visual communicators
making a difference
in Europe, abroad



By Chief Master Sgt R.C. Smeeth
HQ USAFE/SC

RAMSTEIN AIR BASE, Germany — Multimedia continues to play a crucial role in the nation's fight against terrorism. Decision makers are using imagery from the field to execute their objectives, and recovery teams are using multimedia to record the losses of America's fallen heroes.

From operations in Africa to operations with the Navy SEALs, USAFE's communications teams are proving to be more valuable every day.

Although the teams are primarily working to document military history, they're also making sure they're working smarter, not harder.

Our experience from the Kosovo air campaign triggered a series of procedural and technical innovations.

"We were hampered by the size of our standard legacy pallet," said Tech. Sgt. Robert Talenti, 48th Communications Squadron, RAF Lakenheath. "To overcome this problem, we tailored our process down to a mid-size backpack."

Another example involved the deeper fundamental issue of imagery management. Master Sgt. Dennis Boucher, USAFE CSS from Ramstein AB, Germany, added, "It [the imagery management process] was broken and we fixed it. After an in-depth review of commercial practices, we worked shoulder-to-shoulder with a company to design and implement our own solution to resolve imagery distribution across the Department of Defense."

Operation Brilliant Lion, a humanitarian operation in Africa, was the first chance to showcase the new technical solution.

From remote regions in Africa, multimedia photographers transmitted their products via the web to the USAFE Command Media Server. Within seconds of transmission, critical images showing the extent of flooding in Mozambique daisy-chained across the globe making them available to senior leaders. CMS

was an immediate hit.

Operation Enduring Freedom also placed new challenges at our doorstep. Blackout requirements made documenting nighttime operations next to impossible. To combat this challenge, USAFE's multimedia specialists secured the latest in night vision technology. It was important that we meet our mission requirements, and it was also imperative that we didn't compromise those involved in nighttime combat operations.

Documentation teams were continually called upon to perform various assignments throughout Europe and Central Asia.

► Master Sgt. John Snow and Tech. Sgt. Ed Holzapfel from 786th Communications Squadron out of Ramstein responded to one such challenge. **They were included in Landstuhl's regional medical forensic team.** Their support included operations in Afghanistan and Pakistan. Working under sporadic enemy fire, they assisted in recovering the remains of personnel from a MC-130 crash site. **The entire team was cited for its exceptional bravery and received the Bronze Star.**

► Technicians from 52nd Communications Squadron out of Spangdahlem AB, Germany, also found themselves at the front lines. This 15-person multimedia work center deployed to various hot spots logging more than 800 man-days in deployed roles.

► Senior Master Sgt. Brian Duke and Staff Sgt. Shane Felde accompanied USAFE's **Contingency Response Group** into Uzbekistan. Their imagery proved crucial to Air Mobility Command engineers who dispatched a special Regional Maintenance Team to repair a broken C-5 landing gear.

► Master Sgt. Blake Borsic led another team from the 52nd CS to support classified **interdiction operations.** Cited for their continual involvement at home and deployed, the 52nd CS's multimedia center was awarded the **2002 USAFE Communications and Information Medium**

Work Center Award.

► The 886th Communications Squadron multimedia team from Sembach AB, Germany, supported USAFE's CRG. **It was the only multimedia team on the ground in Iraq.** Their images portrayed USAFE warriors in full battle dress engaged in the largest airborne assault since the Vietnam War.

► A multimedia team from 100th Communications Squadron, RAF Mildenhall, operating out of RAF Fairford documented B-52 air operations. Their video editing skills were essential to cataloguing **Weapons System Video** footage collected from a newly installed target lightning pod.

► The 39th Communications Squadron out of Incirlik AB, Turkey, supported by 52nd CS photographer Staff Sgt. Kim Drake, covered operations in Turkey. These personnel found themselves documenting events ranging from harbor activities, base build-ups and locating stray missiles.

Exceptional VI professionals like Tech. Sgt. Justin Pyle, 786th Communications Squadron, said the capabilities USAFE multimedia offers make the 3V teams an invaluable force multiplier.

"The great thing about our job is that you never know what you'll be doing tomorrow. One day you'll be with Army Special Forces, the next day you're working with a Navy SEAL Team, and the next day you're off to document helicopter rescue operations. With this comes the responsibility to be able to do anything."

BOTTOM LINE

Multimedia teams from across United States Air Forces in Europe document crash sites, support interdiction operations, work in a Contingency Response Group, win workcenter awards and receive the Bronze Star. But it's all in a day's work for the teams who are prepared with the right equipment and the right technology.



Paying tribute

Airmen of the 447th Expeditionary Communications Squadron raise and salute the flag Dec. 7 in remembrance of Pearl Harbor Day at Baghdad International Airport, Iraq.

Staff Sgt. Verlin Collins / 1st CS



10 QUESTIONS FOR Col. Ronnie Hawkins

Col. Ronnie D. Hawkins is director of Communications Operations, Air Force headquarters. He is responsible to the deputy chief of staff, Installations and Logistics, and to the chief of staff of the Air Force for developing policies and procedures for communications enterprise operations.

WHAT IS ILC'S ROLE IN ENSURING C&I PROFESSIONALS ARE TRAINED AND EQUIPPED FOR FULL-SPECTRUM OPERATIONS?

Our biggest role is assuring that day-to-day operations have operational and organizational discipline.

WHAT ARE YOUR TOP THREE PRIORITIES?

My No. 1 issue is making sure we deliver what I call "tooth-to-tail" training. By that I mean we need to institutionalize our training such that when any individual—enlisted, officer, civilian and/or contractor—comes into the comm career field, we begin a training program and contract their training so we know at specific times what gates they need to meet, what type of training they need, and what type of certification and capability they're able to deliver.

Right now we sort of do that with paper and pencil, and the reality is with our current technology, we should be able at a moment's notice to know the status of our career field and how well it's trained and capable of combat operations.

My next principle has to do with instilling operational discipline within the community and in particular in the AFNOSC, NOSC and NCC relationships. As we've matured from having just a NCC, and then a NCC and



NOSC, and finally all the way up to an Air Force-level NOSC, we've had to be sure that they're latched up and doing the right things to have the best presentation of forces for the MAJCOM commander, or for the combatant commander for that matter, that lets them know exactly the capability and lethality of the communications network that they have at their disposal.

The final principle is developing a "six sigma"* approach to information assurance, and it ties into the other two principles. When you start looking at the net-centric environment that we're now operating in, and thinking of the machine-to-machine capabilities that the chief (of staff) is looking at, and the airborne network integration that we're focusing on, we can't afford to have any type of downtime attributable to a lack of discipline when it comes to information assurance. I use the six sigma

approach in focusing in on what you see happening within the airline industry today, in that thousands of aircraft take off and land every day. Given that problems do occur, the number of accidents is down in the .00001 range. And that's where we've got to be with our information assurance capability in the Air Force.

HOW DOES ILC AFFECT THE BATTLEFIELD?

The biggest thing that we've got to do is manage the technology explosion that's out there. We've got to be deliberate yet nimble in how we do that to the point that we aren't the people who are impeding progress, yet ensuring a level of success as a result of strong information assurance processes.

HOW DOES TRANSFORMATION FIT IN?

Everything we do within ILC is focused on making sure we have standard tactics, techniques and procedures. As a result, we're always in the middle of that transformation process our Air Force is experiencing. And quite frankly, the Air Force has been experiencing transformation since its inception.

For example, we're able to execute the warfighting operations from thousands of miles away, and that's been enabled because of communications transformation and how we operate today. (Brig.) Gen. (William T.) Lord (ACC director of Communications and Information) had an article in the September *intercom* that talked about communications "firsts" as a result of Operations Enduring and Iraqi Freedom. That was as a result of this transformation.

DO YOU ENCOURAGE INNOVATIVE THINKING WITH BASE-LEVEL COMM TROOPS?

Yes and no. Innovative thinking is obviously encouraged, however, the implementation of concepts needs to be done in a deliberate yet nimble fashion.

ion. Therefore, all of those good ideas need to be watched and measured against the effect that we want to create as an organization as a whole vs. an individual wanting to do something for a few.

We need to watch to make sure well-intended actions don't create unintended consequences. All innovation is encouraged, but we've got to insert it and match it up against what our objectives are and what effect we want to bring to the battlefield.

HOW DOES ILC INTERACT WITH THE AIR FORCE'S CHIEF INFORMATION OFFICER?

We've got a very good relationship with the CIO. We talk and work literally on a daily basis, and we're tied together both with the CIO and the XIC communities because of the nature of the work. As we matured as a directorate, we gained the confidence of not just the CIO, but also the comm commanders and the MAJCOM commanders in the field, to where they understand that we are helping them do the day-to-day comm operations. The CIO has been coming to us to help deliver or complete programs or initiatives he has on his scope.

I wouldn't deny that there are issues we also deal with that we don't necessarily agree on, but when you step back and look at it, we all have the Air Force's best interests at heart and are focusing in on delivering comm capabilities.

HOW WILL THE C&I COMMUNITY CONTINUE TO BALANCE TRAINING, TECHNOLOGY AND INTEGRATION?

What we've got to do is not necessarily just focus in on lessons learned, but lessons learned which are applied. I see that being done with the lessons learned from OIF where we're setting up MAJCOM centers of excellence throughout the Air Force.

For instance, right now ACC has the lead on pulling together the operational combat lessons learned, and then once we determine what we need to do, we're going to put them out in

the form of Air Force Instructions and directives. Then, we'll make sure we use organizations such as AFCA to go out and do the standardization and evaluation to make sure those lessons learned are institutionalized across the Air Force.

The worst thing we could do is come up with a new idea, put it out to the field, and then not follow up to ensure everyone is trained, or apply the right tactics, techniques and procedures to the new operational way of doing business. It's a long and deliberate process, but we're using MAJCOM SC Centers of Excellence to make this realistic and prove its worth in operations.

WHAT IS THE C&I ROADMAP FOR THE NEXT FEW YEARS?

It starts with those three enduring principles I talked about. We're aggressively pursuing improving our AFIs and standardizing our operations within. If there's a one, two, three, four methodology from a strategic perspective, it's standardizing and instilling operational discipline across the spectrum within the AFNOSC, NOSC, NCC relationships. That's the first strategic vision that we have.

And then we need to leverage this enterprise management concept. It's prevalent throughout the business world and is truly here within the Air Force to where we manage our information technology as an enterprise vs. as each individual base or MAJCOM doing it.

In doing that, we're able to manage and leverage our limited resource in terms of our airmen, civilians, and contractors and total force effort.

As we look at all of the drawdowns that are affecting every career field, we've got to make sure we maximize the contribution of the comm operator.

That strategic focus we're doing is making sure we deliver the core competency that we're best at doing and stop doing the things that we're not the best at doing.

WHAT ARE THE MOST EXCITING AND CHALLENGING ASPECTS OF YOUR JOB?

Wow! The most challenging piece of it is making sure we're staying in our lane.

Right now the XI, IL and CIO split is still not truly determined, and I would say even set hard in concrete, such that there's a lot of seams we still have to overcome.

That's the biggest challenge that I see right now.

The most exciting part about it is working with the people across the Air Force, to make sure we don't allow those seams to become inhibitors to our delivering success in an operational or business world.

DO YOU ENCOURAGE DIALOGUE?

Because we're responsible for managing the day-to-day operations, I encourage dialogue with those in the field.

Just like I said before, the innovation is important. I also believe the communication is vitally important and while we are sitting in this five-sided building that we call the fountain of knowledge, we recognize that we don't have a lock on all of that.

We encourage dialogue ... when we're not doing something right, we need to know it. And when we're doing something right, we need to know that, too, so we can make sure we stay on course. I would invite anybody to e-mail, call, or just write so we can continue a dialogue through this transformation that we're in.

**Note: Six Sigma is a process that helps companies focus on developing and delivering near-perfect products and services by eliminating variability, defects and waste.*

Many financial services organizations have been using this effective strategy to improve customer satisfaction, achieve high levels of process performance and to rapidly identify cost savings.

Show me the money

Fiscal year '03 looked good for C&I efforts

By Col. Rick Dinkins
HQ USAF/XIP

**Funding
from FY03
included:**



**satellite
development,**



**\$140M LMR
investment,**



**Long haul
comm support,**



**and exercise,
modeling and
simulation
requirements.**

PENTAGON — Initial battles for dollars waged at your command's financial management board is where the fight is usually won or lost. That means you must get your critical C4ISR needs ranked high within your command to be competitive with the rest of the Air Force issues being reviewed by the Air Force Chief of Staff.

That's why my most critical task as the Director of Resource Planning for the Deputy Chief of Staff for Warfighting Integration is to advocate loudly and often for the critical resources (dollars and manpower) needed to support C4ISR programs and systems.

From a command, control and communications perspective, we started fiscal year '03 in a decidedly mixed fashion. Congress gave us some significant funding increases in the Defense Emergency Response Fund for information assurance improvements, intelligence communications upgrades, military satellite development upgrades, enhanced Link 16 capabilities and C2 modeling and simulation capabilities to name just a few. However, losses of \$20 million in base communications infrastructure modernization and \$9 million in long-haul communications operations and maintenance funding are just a couple of examples of hurt we all had to manage around.

With the start of Operation Iraqi Freedom, previous concerns about supplemental shortfalls for the Global War on Terrorism ended. Commands were given significant leeway to acquire critically needed communications and C2 equipment and services to meet the surging demand for bandwidth and secure communications at a growing number of operational locations. Funds were used to support a wide variety of programs and sustaining operations to include deployable satellite and communications equipment, INMARSAT service, Iridium contract and toll costs and robust long-haul communications support. Also, a variety of communications infrastructure, intelligence network support and command and control upgrades

were sourced this year to bring connectivity to our warfighters.

As FY03 progressed, communications and C2 commanders and resource advisors worked hard to advocate for a significant amount of priority unfunded communications O&M needs within your commands.

At the Air Staff level, the XI resource team worked closely with the budget analysts in SAF/FM and with the other senior functional representatives at the Operating Budget Review Committee meetings to ensure the need for additional C2 and communications dollars was presented clearly in warfighting terms. As a result of our combined efforts, we received more than \$120 million for a variety of critical communications needs. The first two major ads were for Global Grid connectivity support with Defense Information Systems Agency. We received \$21 million to cover essential DSN, NIPRNET and SIPRNET service for the year and another \$8.7 million to pay the Air Force share of the Iridium Satellite contract that provides critical mobile warfighting services in remote areas of the world.

It was also mandated the Air Force to move all land mobile radios to narrow band frequencies. The Air Force Communications Agency successfully defended more than \$140 million of investment for LMR systems, and we gained an additional \$23 million at three major commands for priority handheld replacements.

We also continue to advocate successfully for the SECAF/CSAF directed server consolidation program to improve base network delivery service to customers at reduced operating costs. Two commands received more than \$11 million for this initiative. Finally, \$6.2 million was distributed for Air Operations Center, Theater Battle Management and exercise modeling and simulation requirements.

BOTTOM LINE

Budget planning starts early and you need to be an advocate who can prioritize your organizational needs as funds compete at Air Force.

A Day in the Life

Mark this date on your calendar!

March 12

Whether you are drawing a graphic at the multimedia shop, sorting mail at an APO, troubleshooting the network, coaching a basketball team, or volunteering in the community, we want to illustrate your efforts, both on the job and after work in our June issue.

Deadline for submissions: April 15

Your submissions can be either in story form or in photographs. Either way you choose, please make sure to review the guidelines for submission at: <http://public.afca.af.mil/submit.html>. If you choose to submit a story, remember that a picture is worth a thousand words, and we invite you to send as many supporting photos as you can. Stories should tell something unique about what you do or where you live as well as the job you have. Photos can and should be taken at all times of the day ... getting started in the morning, during the day, and wrapping up your activities at night. Don't forget the night shift workers! So grab a camera and send in your photos!

Send your submissions to: Intercom@scott.af.mil



What to do with your old



By Master Sgt. Karen Petitt
Managing Editor



As soon as the Air Force announced the test wear phase of its new and improved blue battledress uniform, office conversations quickly turned to what people would do with their old ones ... beyond hunting in them that is. Ideas quickly flowed and thanks to some Air Force spouses who have amazing craft and sewing skills, a few of these ideas came to life. Here's just a sampling of some of the creative things you can do with your set of BDUs. Enjoy!

BAGS

Here's an idea from Christine Woodbury for the beginner seamstress. Just cut off the bottom of the pant leg and sew the ends. The drawstring is already in place. You could make the bag deep or shallow depending on what you want to store. An idea (right) from Holly Isenburger uses the same concept only add an elastic seam at the bottom for use as a plastic bag holder. No need to buy these from the TV for \$9.99 anymore!



BINDER

Gwen Reese finds a clever use for the pant pockets on her version of the binder cover. Just secure those right on the inside to hold your pens, pencils, calculators, etc. Plus, with those handy pant strings, you can keep the binder tied securely shut. All you need is a little glue and then you can be stylin' to your next meeting (or maybe your teen will think it's cool anyway).

JESTER HAT

This one may not be for the novice, but it's just as fun to put together (and wear). Christine Woodbury has been making cute jester hats out of soft felt or sham-type material for the neighborhood kids, but making this out of a BDU was a bit more challenging, she said. It doesn't stretch, so even though this is a large size hat, it will most likely only fit children. Even if you can't wear it, it's still a great hat for your desk or office area. Plus it'll always be a reminder of that good 'ole uniform.



QUILT

Vivian Gardner is a true magician when it comes to quilts. This has been the most charming and useful idea, as I've tested it out at the park and on picnics. I just love this! The pockets actually work and could be used to hold baby bottles or toys as well. What's best is that it's a memento of one's time in the service and could be a great retirement gift.



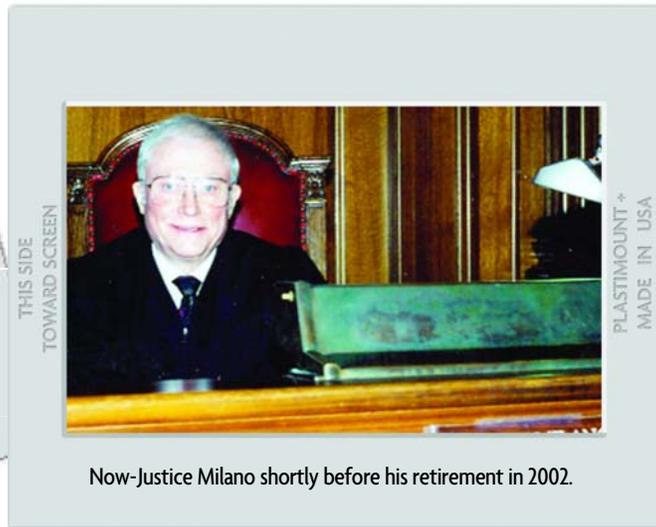
APRON

Gwen Reese came up with this apron used from the shirt. She lined it with black fabric and made strings around the neck and waist. This type of apron comes in especially handy for those who like to grill outside or go camping. It's a little heavier than normal aprons, which is why it's great for those fall, winter and early spring cookouts!



Then
and Now

Then-Sergeant Milano,
an AACS cryptographer
during WWII.



Now-Justice Milano shortly before his retirement in 2002.

John A. Milano

By Don Gasper
AFCA Staff Historian

“Here comes the judge” wasn’t the phrase in mind when young John Milano considered what role in life he might have someday. However, he grew up to achieve a distinguished law career both in private practice and on the bench, rising to become a New York State Supreme Court Justice. Prior to entering the law profession, a key life experience that deepened his appreciation of his country and its laws was his service overseas as a cryptographer in the Army Airways Communications System during World War II.

Born of immigrant parents, Judge Milano grew up in the “Hell’s Kitchen” area of New York City during the Depression. His gifted singing ability earned him a spot in the children’s choir of the Metropolitan Opera, and he performed in many operas for several years while attending public school. On his 18th birthday in 1944, he enlisted in the Army Air Corps, and became an AACS cryptographer in the China, Burma, and India Theater. He served mostly at Myitkyina Airfield, Burma, primarily supporting the large-scale airlift “over the Hump” of the Himalayas from India to China, as well as resupply movements along the Ledo (Burma) Road. He recalled “seeing in Burma and India how the vast majority of people lived, their quality of life” and “realized as an American how other people live in this world. It was an eye-opening experience for me and I have never forgotten the lesson, that we as Americans do not realize at times how fortunate we are to live in a blessed country like the United States.” Despite the rough conditions in theater, he felt “it was worth the two battle stars [devices representing his participation in the Burma and China Air Offensives on

his Asiatic-Pacific Theater Campaign Medal] and a Meritorious Unit Citation.”

After his discharge in 1946, he spent another year at City College earning straight A’s before he was accepted into the New York University School of Law. He recalled years later that at this pivotal point in his life his singing talent stirred in him “a desire to be in show business,” but his “love of law and learning won out.” Upon receiving his degree in 1950, he began his 23 years in private practice, during which time he served 16 years as an Associate Counsel for the New York State Senate. He began his judicial career in 1973 and quickly moved up the ranks of the New York City judicial system: appointment as one of the first Housing Court judges of the City of New York; Judge of the Civil Court; Judge of the Criminal Court; and a Justice of the State Supreme Court. In addition, he lectured and taught law at local area schools for many years. Upon reaching the mandatory retirement age of 76, Judge Milano retired in December 2002 after 30 years on the bench. However, he did so reluctantly as he “would have opted for four more years if I were able to do so. . . . The citizens of New York elected me to interpret and enforce . . . laws, . . . their confidence in me was . . . a privilege and an honor.” Following retirement, he became and continues to serve as chair of the Public Relations Committee of the Queens County Committee to Promote Public Trust and Confidence in the Legal System, and became a consultant. In reflecting on what his wartime service in AACS meant to him, he said those in uniform now serve with just as much at stake: “I was proud to [serve] fighting for everything we stand for — things have not changed — we still today are doing just that!” He and Gloria, his bride of 27 years, reside in Bayside, N.Y. A son, Gary, also resides in New York.

Remembering VIETNAM

By retired Master Sgt. Alfonzo Celaya

While I am proud of my service in Vietnam 30 some odd years ago, it still seems like a bad dream. I have nightmares, and the smell of dirt and bodies of the young soldiers who died there are still with me. I volunteered for Vietnam and received an assignment operating teletype machines with the 1964th Communication Group at Tan Son Nhut, where I served from February 1966 to February 1967.

Upon arriving to the base, my hut buddy told me that the VC would never attack us here in Saigon as they did upcountry and in the Delta. It was around noon when there was the loudest explosion I had ever heard and the whole building seemed to shake. This was followed by another loud explosion and my buddy says, yep, that's what they do, blow up something ... the Vietnamese gather around to see what has happened, and they blow up another one, getting a group. That was my introduction to Tan Son Nhut and Saigon. I arrived when the Army was building up its forces and there was quite a lot of fighting all over

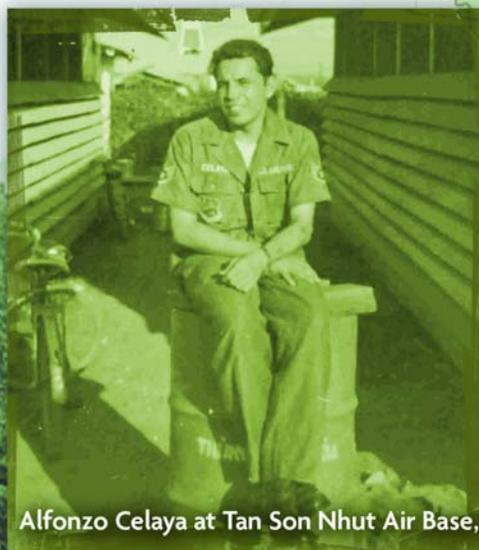
the country, but at Tan Son Nhut we saw all the men killed in action as the morgue was located there.

After each big fight the KIA's were brought to the morgue where they were cleaned up and placed in the sealed silver colored caskets for air shipment to the states. The bodies were unloaded from flatbed trailers or trucks and dropped outside the morgue on the ground by their own buddies. It was horrible ... sometimes a poncho would open up and a leg or arm would fall out. The morgue was opened up and as the technicians were working on the bodies, the binjo ditches would run red, full of blood. All of us were required to work 12 hours a day, seven days a week. It was rough on the teletype machines as we had around 25 or so sites that ran continuously. Our shop was located by the transmitter site and it was across the highway from one of the helipads the Army used. During firefights the choppers would bring in the wounded.

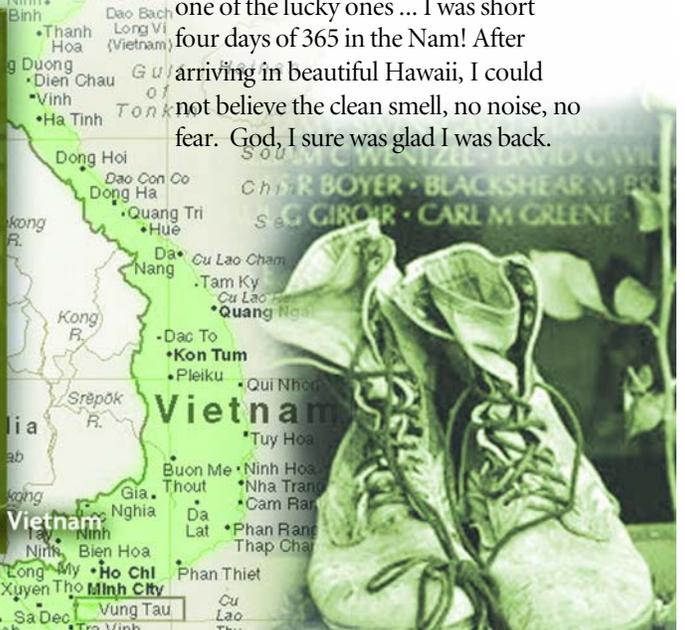
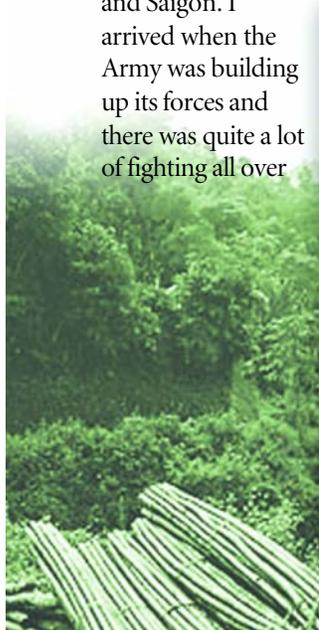
The food at the mess hall was pretty

good, considering the eggs were powdered eggs and at first I kept wondering why all we got was raisin bread until I asked and was told it was not raisin bread, it was the bugs from the flour and it was OK the vets had approved it!

In April of that year I woke up to mortars exploding all around me. Everybody was yelling turn off the lights ... and some guys were jumping from bunk to bunk knocking out the light bulbs. Some of us were scared, but we also had some blowhards who kept yelling, come on out and fight you VC! We built bunkers real quick after that. In December 1966, I was caught in a grenade attack near where I lived. It happened so quick, I was dazed and scared. It was just like in the movies, it seemed the grenade exploded in slow motion, and I could see the injured coming out, but I could not hear a thing. I looked up and saw tracers all over the place, Vietnamese policemen and GI's and Americans all shooting, what at I did not know. I left Tan Son Nhut for Hawaii soon after that. I was one of the lucky ones ... I was short four days of 365 in the Nam! After arriving in beautiful Hawaii, I could not believe the clean smell, no noise, no fear. God, I sure was glad I was back.



Alfonzo Celaya at Tan Son Nhut Air Base, Vietnam



Civilian
Focus

SCOPE Champion

Roadmap for civilians outlines career, not just a job

The Air Force's SCOPE Champion program has been approved by the Communications and Information Career Program Policy Council for implementation, so here are some things you may need to know.

SCOPE Champion is the Air Force's program to groom potential C&I civilians to be highly competitive for GS-14, GS-15, and SES positions. It emphasizes leadership capabilities via mobility, education, breadth and depth of training and expertise, and active mentorship. Permanent Air Force employees registered in CICP at the grades of GS-13, 14, 15 and equivalent are eligible to register for the program. Presently, all GS-15 CICP positions will be filled using SCOPE Champion processes and procedures. In the near future, all supervisory GS-14 CICP positions will be included.

Candidates are reviewed using a SCOPE Champion **Records Screening Score**, which consists of five elements: education, professional development, supervisory experience, different services/agencies, and functional areas with a maximum point value of 215 points.

A SCOPE Champion **Mentoring Guide** has been developed and is designed to provide opportunities for GS-13/14/15s to receive individualized counseling and guidance to enhance their proficiency, support their career development and professional growth. Proteges can enhance existing skills, develop new ones, and have good role models available to act as sounding boards. Mentors will

have the opportunity to enhance their leadership and coaching skills, gain personal satisfaction, recognition, develop personal contacts, and learn from their protege. The goal of the program directors is to hold **Road Shows** at least once a year, updating information on the program, and actively interacting with senior leaders and CICP registrants.

Each C&I civilian eligible to register for SCOPE Champion, must seriously consider this program in relationship to their career goals. **The question to answer: Do you want a career or just a job?** If you aspire to have a career in the C&I community, then your future looks bright if you follow the roadmap to complete higher education, consider mobility to avoid being stovepiped in one C&I discipline or functional area, complete professional military education either through in-residence courses or by correspondence, and be ready when the opportunity presents itself. Consider finding a mentor, either through the SCOPE Champion program if you have already applied, or through the CICP program. Finding a good mentor can be invaluable to your future.

Also, we are currently establishing criteria that will tier each applicant into one of three categories based upon their SCRSS and ECQ score: **Ready, Groom, or On-Track**. Once the tiering has been

approved, applicants will know exactly what they need to do to be ready for promotion/reassignment. Along with the tiering, every SCOPE Champion position will be grouped into one of four categories: AFSLMO developmental, SCOPE Champion developmental, On-track broadening, and Parking and Technological depth. We have also developed a proposal, currently being reviewed by Air Force functional representatives, to **revise the Civilian Competitive Development Process**.

The proposal will put the functional senior leadership squarely in the center of the prioritization of CCDP candidates from the functional areas. The program includes school courses at Air Command and Staff College, Air Force Legislative Fellows Program, Senior Service Schools, Academic Programs such as Harvard JFK School of Government, Air Force Institute of C&I Technology, and Experiential Programs, such as DoD Executive Leadership Development Program. *(submitted by CICP)*

**SCOPE
Champion
Web site**

www.afpc.randolph.af.mil/cp/cicp/Scope.htm

DSN: 665-3691

News Briefs

New developments

CTO WORKING GROUP REPORT:

The Air Force Communications Agency hosted a second Certificate to Operate working group for all major command CTO offices Nov. 3-6, a follow-up from a previous February meeting. It provided a forum to address the concerns of streamlining the CTO process and defining networthiness business rules.

Topics discussed included how the Air Force plans to consolidate legacy systems into Web-based application that will reside on the Air Force Portal, incorporating a reduced sign on—eliminating the need for users to remember multiple login credentials, and encouragement of program managers to develop applications to be designed for the Global Command Support System-Air Force Integration Framework and meet the criteria for level-four compliance.

A major accomplishment from the meeting was the development of definition for True Web-Based Applications. The definition address all concerns dealing with vulnerabilities associated with developing, testing and deploying Web-base applications residing on the Air Force Enterprise Network. (AFCA/WF)

C&I SCHOOLHOUSE: The Air Force Communications and Information Training schoolhouse at Keesler AFB, Miss., has updated the Basic and Advanced Communications Officer Training programs and is now offering new ones.

During a Utilization and Training Workshop in June, the team determined that the 13-week BCOT course, while extensive and informative, could actually be shorter and more comprehensive. A five-week course, Expeditionary Communications Officer Training, was determined to be the best way to ensure that many aspects of the career field that comm officers may encounter at their first duty station are covered. A new Communications



Tech. Sgt. Lisa Zunzanyika / 1st CS

Sand box

Members of the 447th Expeditionary Communications Squadron construct wooden handholds for installing base infrastructure cabling at Baghdad International Airport, Iraq, in November.

Battlespace Management Course will be condensed to three weeks and will use field subject matter experts. Other communications subjects will be covered in follow-on elective supplemental courses that range in length from four days to four weeks. Some of the topics are: network training, network operations, executive officer, information operations, deployed communications, and warfighting integration. A separate electrical engineering trailer course will also be offered. These courses may be taken immediately following the basic course, or the student can return to Keesler as their primary duties change to receive the initial or refresher training.

The two core courses will debut in March. Along with course rewrites, six rooms in McClelland Hall and the AFCOT schoolhouse will undergo a \$45K facelift. The renovation will be the start of several improvements to the schoolhouse. In addition, each room will be outfitted with Smartboards™ and

high performance student and instructor workstations. To accomplish this overhaul, the schoolhouse is ramping down from October to February; although instructors will still be teaching until the Jan timeframe, the reduced student load will allow for course development and instructor training to take place. (Cpts. Billi Montgomery and Janis Mack)

AEF update

CENTERS OF EXCELLENCE: Two centers of excellence and two new Air Force schools were created by the Air Mobility Warfare Center, Fort Dix, N.J., during a reorganization in November. In addition to the new Agile Combat Support and Air Mobility Centers of Excellence, the AMWC is now home to the AF Mobility Operations School and the AF Expeditionary Operations School. These schools join the existing AF Mobility Weapons School, Air Force Mobility Battlelab and Resources Directorate under the Air Mobility Warfare Center. The reorganization officially took effect Dec. 1. The new centers of excellence bring together

subject matter experts focused on improving Air Force capabilities by developing or improving doctrine, training, organization, materiel, leader development, personnel and facilities. (Tech. Sgt. Jeff Capenos, AMWC)

Saving money

MORE COMPUTERS FOR LESS:

Collective buying power helped Air Force Information Technology Commodity Council members save three major commands more than \$4 million in computer purchases. Representatives from Air Combat Command, Air Education and Training Command and the United States Air Forces in Europe now collectively have 14,863 desktop and 763 laptop computers. These would have cost them the extra \$4 million if they had bought them through their respective channels rather than using the council's help. Ken Heitkamp, council director and Air Force Standards Systems Group technical director, said that by



getting the Air Force's major commands to agree to three mainstream computer configurations — one desktop and two notebook PCs — the council could lower purchase and operational costs. Also, this approach helps make sure users are buying computers intended to be used for three or four years and to meet the architectural targets Air Force officials established.

The current standard desktop PC configuration includes a 2.6-gigahertz Pentium M processor or equivalent, an 80 gigabyte hard drive, 512 megabyte of RAM, a DVD-re-writable drive, four USB 2.0 ports and a 10/1,000-MB per second Ethernet network interface card. Notebooks require a 1.6-GHz processor, a 40 GB hard drive and at least a 14-inch screen. The commands were able to take advantage of volume discounts, something individual budgets just didn't support.

(AFMC)

IDEA SAVES \$2 MILLION:

Uncovering hidden Government Purchase Card program funds that

netted the Air Force more than \$2 million has earned an Air Force Research Laboratory, Rome, N.Y., procurement analyst \$10,000 from the IDEA program. Susan Hluska's suggestion is expected to save more than \$10 million during the next five years, officials said. The suggestion focused on GPC accounts used for purchases under \$2,500 to support the information directorate's research and development projects. Many of these accounts were terminated at the end of a fiscal year because of lack of funding, and a new GPC account opened with subsequent fiscal year funding. After the account was terminated, vendor refunds, bank rebates and other credits were posted to the inactive accounts. "It was purely by accident that I spotted it buried in a report generated by USBank," she said, of funds being held by USBank in hundreds of inactive accounts. "The bank was reporting quarterly credits to Air Force GPC Agency Program Coordinators for credits applied to active accounts; however, it was not automatically refunding these credit

balances on inactive accounts. Some of the credits had been there for years." Ms. Hluska said information that money was sitting there was well documented, but it wasn't information the bank gave out freely. Implementing Hluska's suggestion recouped at least \$20,000 during fiscal year 2003 for the AFRL GPC Program, and more than \$2 million Air Force-wide, Air Force officials said. The Air Force has about 48,000 GPC accounts. (AFMC)

KUDOS

IMPROVING PHONE LINES: The 38th Engineering Installation Group at Tinker AFB, Okla., is assigned the responsibility to buy and manage local telephone service in the continental United States for all active duty Air Force bases, Air Force Reserve units, Air National Guard bases, and Recruiter sites. As experts in the local telephone business, they are guided in the acquisition mission through significant changes impacting the telecommunications marketplace such

as divestiture (the breakup of AT&T) and deregulation (of the telecommunications industry) and the Competition in Contracting Act (early to mid-80's), implementation of the Federal Acquisition Streamlining Act (1996), Clinger Cohen Act (1996) and finally the Telecommunications Act of 1996. This way of doing business for the Air Force was not very smooth in the beginning as it attempted to compete service at Scott AFB, Ill. The competitive solicitation resulted in "no response," not even from Ameritech, the regional Bell operating company serving Scott AFB. The Air Force was left with no option but to revert to tariffs established by the Illinois public utility commission to establish phone rates for Scott AFB IL. Now, however, there have been more than 500 competi-

tive solicitations issued to industry, and savings in excess of \$33 million have resulted in what the Air Force pays in its phone bill over a five-year period. Examples of these savings are 70 percent at Kirtland AFB, N.M., 59 percent at Fairchild AFB, Wash., 26 percent at March ARB, Calif., and 24 percent at Langley AFB, Va. There are other benefits to the competitive process than just saving dollars. New companies, such as Cox Communications, a cable TV company, leverage their existing facilities and improve the delivery of service from analog to digital and from copper to fiber optic cable. In some cases the improvement in service to the Air Force is something as simple as completely eliminating busy signals on the phone lines. There's also an increased use of Synchronous Optical Network (sonet) rings to deliver services with the inherent reliability of a ring architecture. (38th Engineering Installation Group)

WET FILM PROCESSING: Although a large majority of imagery is now produced digitally, the 9th Intelligence Squadron at Beale AFB, Calif., still trains, works and deploys with wet film imagery. About 70 people from the 9th IS recently participated in a training exercise for the Deployable



Staff Sgt. Suzanne Jenkins / 1st CTCs

Comm donates supplies

School supplies donated by the 52nd Communications Squadron, Spangdahlem, Germany, were brought to an Al-Khaldia Elementary school in Kirkuk, Iraq to be given out Nov. 11. Al-Khaldia was opened to students Oct. 1.

Shelterized System-Film system. This system, which is comprised of 24 vans that piece together, is the Department of Defense's only deployable, long-roll wet film processing, exploitation and dissemination.

The film is shot using the Optical Bar Camera sensor on a U2, or the less commonly used IRIS sensor. "In the initial phase of conflict, we're really the ones relied on to scope the whole battlefield and pick out the critical areas to maintain awareness," said Col. Bary Leister, 9th IS commander. "We provide very precise clarity and something equally important – absolute certainty. If you provide a digital image to a coalition member or the United Nations, there's a possibility they may say we've altered or changed the image to reflect something we want it to. With a negative or cell-based product, there are no arguments; what you see is what's there."

The unit has forward deployed three times in the last three years. With more than 40 people deployed in support of Operation Enduring Freedom from October 2001 through March 2002, the unit processed approximately 150 miles of film and exploited more than 1,400 targets. During the year deployed in support of Operation Iraqi Freedom, the number of targets exploited increased to 2,000. (1st Lt. Kelly Gabel, BAFB)

AFA SALUTES ACTION OFFICERS:

Five action officers stationed in the National Capitol Region area have been named the Air Force Association's Outstanding Action Officer for the fiscal year 03.

Carol Swan – *Air Force Frequency Management Agency*. She performed oversight of the Air Force's 28,233 permanent frequency assignments. She also reviewed over 24,000 actions per year on new frequency assignments, modifications to existing frequency assignments, and deletions of frequency assignments no longer required. Ms. Swan worked with Air Force Communications Agency on ensuring the right roadmap for transitioning AF Land Mobile Radios to the recent federal



narrowband mandated frequencies which must occur by 2005 for some LMRs and 2008 for the remainder.

Maj. Steven "Monk" Waller –

Directorate of C4ISR Infrastructure.

Major Waller was the Air Force spokesperson at the National Fire Control Symposium, highlighting the communication deficiencies from Operation Iraqi Freedom for locating, identifying, targeting, and attacking targets. He led XI efforts with DARPA for Advanced Tactical Targeting Technology and Tactical Targeting Network Technology, which are now Air Combat Command's top fiscal year 04 Advanced Concept Technology Demonstration projects. He advocated warfighter requirements for the advanced Air Force waveform for the Joint Tactical Radio System for all Cluster 4 recipient platforms. This resulted in the Air Force being the lead in identifying wideband networking waveform requirements. He was also the catalyst for the Network Centric Operations panel presentation at the C4ISR Summit, resulting in a storyboard and movie highlighting Airborne Networking and Machine to Machine integration.

Maj Deborah Cafarelli –

Directorate of C4ISR Integration. As Deputy Chair, Innovation Panel, she garnered AF Corporate Structure support and funding for programs, including Advanced Concept Technology Demonstrations, Battlelabs, and Experimentation. She championed funding restoration of the Warfighter

Rapid Acquisition Process in fiscal year 05 APOM, which resulted in \$125 million being restored. She expedited the fielding of 13 critical innovations to the warfighter, many of which were used in OIF, including Master Air Attack Plan Toolkit (reduced AOC planning time), a new blood-clotting agent, and chemical/biological defense. She was handpicked by

AF/XI to draft initial concept of operations for the DCI's Transformational Space and Airborne Project. It was adopted by DUSDI and used to guide investment options for US's \$200B national ISR program.



Staff Sgt. Steven Pearsall / 1st CTCs

DoD's imagery management server

Contractors from Data Path Incorporated and Senior Airman Jeremy Fuqua, 83rd Communications Squadron, install the Department of Defense's new imagery management server in Baghdad, Iraq, allowing Combat Camera teams to get imagery to the Coalition Provision Authority there faster.

Jeff Hansen – *Directorate Resource Planning.* He championed AF/XI as USAF doctrine authority, validated the deputy chief of staff credibility, and won hard-fought victories. He guided XI through innumerable Joint actions, with 100 percent on-time, on-target responses to combat needs; all 26 actions since June were tied to XI's integration objectives. Among those were Joint Tactical Radio System, Spectrum Strategic Plan, Link 16 Plan, and LMR Channeling Plan. Mr. Hansen led the DCS through difficult congressional actions by staffing 20 Questions for Record; all error free, and on time. He also produced time-critical results by authoring the DCS plan for CSAF Issues Website.

Maj. Thomas Braunlinger –

Directorate C4ISR Architecture and Assessment. He was selected as the first Command and Control Constellation Program Element Manager, a \$376 million account. He was entrusted with the initial AF/XI Horizontal Integration objective, which ultimately impacts C4ISR AF-wide. He guided management level architecture training throughout the Air Force. He advocated and convinced AFIT to establish a formal C4ISR architecture course. He was key to Integration Capabilities Review and Risk Assessment objectives and helped validate the architecture component and helped bring logic to complex analysis/assessment process.

SECURITY CONCERNS & EMBEDDED WIRELESS NOTEBOOKS

About wireless devices or chips

A wireless communications device or chip may be embedded in that new notebook computer you just received. Wireless local area network devices are now being provided with or built-in to many new notebooks and other portable electronic computing products. Wireless LAN products have become a popular feature on notebooks due to the growth of Wi-Fi "hot spots," which are wireless access points available for public use that comply with Institute of Electrical and Electronic Engineers 802.11b, 802.11g, or 802.11a wireless LAN standards. Bluetooth, a wireless personal area network product, which is mostly used for peripheral connections, is also convenient and being built into notebooks more often.

So what's the problem?

Hidden wireless devices are a security concern because the device is often configured to automatically search out a compatible access point within the area and form a connection to a wireless network or other wireless enabled device without the knowledge of the user. This becomes a huge issue if the notebook computer is used for classified purposes or used in a classified environment. According to Air Force policy, computers with operational wireless devices installed cannot be connected to a classified network or taken into an area where classified data is being processed. The devices must be physically removed. **Note: disabling the device by only using a software switch is not an option.**

What do I need to do?

Know the environment a notebook will be used in before making the purchase order. For military environments, it's best to avoid notebooks with embedded wireless communication devices, because it's easy to add a wireless device if needed, and then easy to remove it when necessary. Some built-in wireless LAN devices, as well as Bluetooth devices, are manufactured as modules or small circuit cards such as mini peripheral component interconnect cards (pictured at right), which the user can easily remove. Unfortunately for military users, others are installed as part of the motherboard and removal would require the removal of soldered IC chips and components. The user cannot remove these because it could possibly damage the computer. So, no matter what source you buy the computer from be sure to avoid embedded wireless devices or get the type that's removable.

For more information, see:
<https://www.afca.scott.af.mil/wireless>



Injustice anywhere is a threat to justice everywhere.

- Dr. Martin Luther King Jr.



Curious Afghan children sit along a poppy field and watch as coalition forces headed by the U.S. Army Criminal Investigation Division unearth suspected war crime graves in their village of Markhar in Tora Bora. The Tora Bora region in Afghanistan was the last known site where Osama Bin Laden had commanded and fought. From: [ebony.com](#) by [suzanne permylak / shutter](#)

"No man is entitled to the blessings of freedom
unless he be vigilant in its preservation."

– GENERAL DOUGLAS MACARTHUR



intercom

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DECISION SUPERIORITY EQUALS MISSION SUCCESS

- ▶▶ Estimating bandwidth is not a roll of the dice
- ▶▶ Clear canopy required for Decision Superiority
- ▶▶ Super Fast-CD: Right tools for the right decision