AN AIR FORCE POWERED BY
INFORMATION MANAGERS

intercom

21 New wartime duties for 'old' IMer

Today, information managers are successfully putting their peacetime skills to the test on the battlefield. Although workgroup management takes up a lot of their time, it's only one example of the duties they perform in their vital role in accomplishing the mission.

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Cover by Tech. Sgt. George Jumara

The Air Force of the 21st century is powered on information and associated technology, and the information manager is key to managing this critical national resource.

X marks the spot
integrate, innovate, dominate

Air and space core competencies
Bringing decisive effects to joint warfighting

By Lt. Gen. Leslie F. Kenne
Deputy Chief of Staff for Warfighting Integration Pentagon

As an integral member of the joint team, the Air Force must provide the joint warfighter unmatched ability to achieve his air and space operational objectives at a time and place of his choosing. Our challenge is to be poised to swiftly and decisively meet today's security challenges, while planning to transform into tomorrow's fighting force. As the chief of staff of the Air Force's focal point for warfighting integration, I need to ensure our investments, architectures and capability requirements synchronize to deliver uncontested air and space combat capability.

Recently, the secretary and chief of staff of the Air Force refined the way we articulate our air and space core competencies to **developing airmen, technology-to-warfighting,** and **integrating operations**. Our air and space competencies form a foundation for how we go about organizing, training and equipping the force. Let me share with you a few of the initiatives we have taken on to address today's warfighting challenges.

Developing airmen: the heart of combat capability

"The value of strategy, technology and organization are diminished without professional airmen to leverage their attributes. Our Total Force of active, Guard, Reserve, and civilian personnel are our largest investment and most critical asset."
James G. Roche
Secretary of the Air Force

Our combat capability resides in the men and women of the Air Force. While technology, organization and strategy contribute to combat effectiveness, our most essential ingredient to success remains the professionally trained airman. This is why we choose to invest so much in training and development.

The air and space operations center, or AOC, weapon system is maturing rapidly. Key to that weapon system is building the professional cadre of warfighter-airmen to conduct planning, coordination, command and control of airpower from the AOC. The **Command and Control Warrior School** at Hurlburt Field, Fla., is working to incorporate the current Joint Aerospace Command and Control Course, system administration and other AOC operator/ATO planning courses in the Falconer Formal Training Unit, or FTU, curriculum. The Falconer FTU courses will include instruction for crew positions within the Falconer AOC and are focused on approximately 10 functional or specific tracks of training. To develop hands-on experience, the Falconer FTU will stage several small exercises and evaluate attendees. The Falconer FTU initial validation class will be held during the fourth quarter of FY '04.

On another development effort, we believe that architectures and

the architecture process are fundamental to our integration initiatives. Our architectures are foundational in aligning and assessing programs with desired capabilities and Air Force investments. As we go about the very complex business of building systems to improve or increase warfighter capability, it becomes clear that a better understanding of architectures is required. To promulgate that required level of understanding throughout the Air Force, we recently developed and conducted the initial offering of our **C4ISR Architecture Management**. The very successful course provided overarching instruction to a cadre of Air Force pacesetters responsible for building and assessing C4ISR systems. Our architecture course for managers is just one part of a proposed four-part approach to increase overall understanding of architecture. In the future, the Air Force plans to develop and deliver executive-level, practitioner, and tool-specific architecture instruction through a variety of Air Force and commercial training sources. Through this Air Force-wide training effort, we will develop a cadre of architecture experience and begin to pave a smoother course toward delivering desired capabilities to the warfighter.

Applying technology to warfighting: the tools of combat capability

"Science is in the saddle. Science is the dictator, whether we like it or not. Science runs ahead of both politics and military affairs. Science evolves new conditions to which institutions must be adapted. Let us keep our science dry."
Gen. Carl M. "Tooey" Spaatz

If the foundation of our air and space combat capability is our airmen, then technology provides the "building" material. Air and space power has enjoyed a synergistic relationship with technology since its inception. Quantum jumps in capability have always equated to strategic advantage for the United States. Precision weapons have redefined the doctrinal principle of mass. Today, JDAMs provide our warfighters a low-cost, precision weapon, and Link 16 offers real-time situational awareness. Together they spell a denigration of the importance of mass. The massive bombing of the World War II era, or even Vietnam, is a doctrine of the past. The political, economic and logistics implications of this technology-driven doc-

Photo by MOD-RAF Sgt. Gareth Davies
Maj. Chris 'Riddler' Holinger, a Joint Surveillance Target Attack Radar System aircraft liaison officer with the 363rd Expeditionary Air Command and Control Squadron, tracks an ongoing Southern Watch mission inside the CAOC at an air base in the Middle East.

trine change are huge.

Recent advancements in stealth, global communications, connectivity, global positioning, manipulation of information, precision and small, smart weapons offer dramatic advantages for our combatant commanders. Air and space power has compressed the line between the strategic and tactical levels of warfare. By leveraging innovation and experimentation, we are translating technology into operational capability and realizing the claims of early theorists that air and space power is inherently a strategic force.

Operational innovations in intelligence, surveillance and reconnaissance, or ISR, include the **ISR manager, or ISR-M,** prototype. ISR-M provides the capability to address Air Combat Command's four pillars of ISR Management: 1) collection planning/confirmation, 2) tasking processing exploitation and dissemination, 3) visualization/situational awareness, and 4) collaboration/distributed operations. Originally a C2 Battlelab initiative, the prototype incorporates distributed common ground systems feeds to include: platform/sensor status/tracks, imagery, signals, threat, and air order of battle. It then correlates and displays them onto a common multi-intelligence workstation. The ISR-M correlated picture of the battlespace will be distributed to the combined air operations center to allow the joint force air control center to make accurate time critical targeting decisions using collection planning/confirmation and collaboration processes.

Not all innovations put bombs on target! The Air Force has demonstrated its ability to connect

the beyond-line-of-sight, or BLOS, with the line-of-sight forces by relaying data from the KC-135 **roll-on beyond line of sight enhancement, or ROBE**. The ROBE "smart tanker" translates and extends the range of communications that will allow all warfighters to have the same situational awareness, whether en route, engaged or air refueling. Aircrews then have the same operational picture. ROBE is on course to exceed requirements set by both the chief and commander, TRANSCOM, with delivery for the first Link 16 BLOS system by September–a full 18 months earlier than planned. Another success story occurred last year at Eglin AFB, Fla., where a risk reduction development demonstration for ROBE was successfully completed on the KC-135. Both are good examples of how we keep our focus on the future and nurture today's ideas into tomorrow's capabilities.

Integrating operations: maximizing combat capabilities

"It is through the seamless integration of manned, unmanned, and space systems that we achieve the greatest return on our investment in our warfighting capabilities."

Gen. John P. Jumper
Air Force Chief of Staff

Innovative operational concepts and the efficient integration of all military systems – air, land, maritime, space, and information – ensure max flexibility in the delivery of desired effects. Building speed and trust-through-accuracy requires seamless integration of systems, activities and expertise across all manned, unmanned and space capabilities.

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 capabilities to the joint battlespace. This "GLOBALnet," an integrated network – air, space and ground – allowing, wherever possible, machine-to-machine exchange of information is intended to provide commanders the right information, at the right time in a form that is easy to understand for rapid decision-making.

Clearly, in a crisis some of the combatant commander's forces will be based and operate from the theater of interest. Equally important, however, are those forces which are based outside the joint operations area. They not only provide critical support, but also provide part of the theater commander's actual combat power. This means that the Air Force GLOBALnet must be a globally-based command and control system to provide commanders information and allow them to direct forces and apply a wide array of air and space combat power within the joint battlespace. This is precisely what our joint and combined air operations centers achieve. Through an integrated, GLOBALnet (air, space and terrestrial) they will fulfill the promise of machine-to-machine information exchange and provide commanders with decision-quality information.

In support of Southwest Asia objectives, we teamed with several units and agencies across the Air Force to design, install, test and activate **the Desert Falcon CAOC** at Al Udeid, Qatar. This state-of-the-art CAOC includes a communications and information infrastructure for processing classified and unclassified information–more than 50 different C2, critical targeting, theater missile defense systems are supported on the network. This robust infrastructure supports more than 1,400 CAOC crewmembers with communications, intelligence, and battle management services. The result is an ability for joint and coalition warfighters to achieve decision superiority over an adversary.

Our Scope Network teams visit all Air Force active and Reserve bases annually to secure and fine-tune network operations vital to supporting the warfighter. Recent visits to the Southwest Asia theater in Oct.-Nov. '02 enhanced network ops at 12 locations supporting Operation Enduring Freedom. Two teams are currently in the SWA theater augmenting USCENTAF personnel with communications beddown at six locations. Additional teams deployed with USAFE personnel to implement communications beddown and augmentation in the EUCOM AOR.

Let me sum up by saying innovative weaponry, state-of-the-art C2 systems, and futuristic air and space capabilities all share a common denominator–our airmen! They bring ingenuity, innovation and energetic dedication to every challenge and guarantee success in space operations and C4ISR. They truly embody the USAF's expanding capabilities in global strike, global response and global mobility. We have high quality people and they will continue our proud heritage of being in the forefront of cutting-edge technology and converting ideas and dreams into combat capability. It is our unique ability to bring together seemingly disparate technologies so effectively that allows us to translate our air and space power vision into decisive operational capabilities.

Turn and face the (sometimes) strange changes

IMer versatility critical as AF evolves with technology

By Chief Master Sgt. Richard T. Small
Air Force Information Management and Postal Career Field Manager
Washington

More than three years ago in the February 2000 edition of the *intercom*, I wrote an article "From quill pens to Pentiums: information managers in the Information Age." In it I described how the role of information managers had grown and changed in unison with the growth and change in the tools used to manage information. In a world filled with uncertainties, one thing remains certain: the constancy of change. While that may seem to overstate the obvious … it's the obvious that often goes unnoted.

I recently had the opportunity to attend the retirement ceremony for a fellow chief and distinguished information manager. As I sat reading the biography in the ceremony program, I contemplated the career field changes this individual encountered in her 30-year career. It was clear she had adapted to those changes in order to remain relevant to the needs of the Air Force and continue her successful career.

Upon completion of technical training, she arrived at her first duty station, where she was assigned as an administrative specialist in the installation's master publications library, or MPL. No … not the base library … but the master publications library. At that moment it occurred to me how strange that term sounded–master publications library. It also occurred to me that there are information managers on active duty today who would fail to recognize that term … and many of those are noncommissioned officers. How quickly, or perhaps not so quickly, things change.

Today, owing to the magical manipulation of "1s" and "0s", each of us is just a few mouse clicks away from nearly instantaneous access to digitized versions of the great majority of the Air Force's standardized publications (policy directives, instructions, manuals, etc.). Gone are the days when young two-stripers (such as yours truly) had to trek across base to "sign-out" a copy of some rarely referenced publication to be reviewed by the commander or first sergeant. Also gone are the oversized warehouses containing stack upon stack of paper-based directives and forms, housed at every Air Force installation in the publications distribution offices, or PDOs.

For decades the Air Force was well served by MPLs and PDOs. However, the advent of digital technology, coupled with an interconnected network of information processing devices, quickly led to the demise of these long-standing methods for storing and disseminating information. Interestingly, although technology facilitated the change, it was people who brought those changes to fruition. As individuals and a collective group, we in the information management career field must recognize that change happens.

Graphic by Tech. Sgt. George Jumara

Because information is now recognized as both a critical national resource and a domain for military operation, along with space, sea, land, and air, change is likely to occur more rapidly for our critical processes than those of other career fields. We must anticipate and be prepared for change in order to facilitate protection of this precious resource and support attainment of military objectives in this new domain.

Each member of the career field functional

Information managers take staff support to new levels

By Chief Master Sgt. R. Wayne Barron
AETC/SCMC
Randolph AFB, Texas

Information management is an evolving career field with new buzzwords such as workgroup management and information technology spinning around it. However, when you really need something done right, no one comes close like a staff support information manager. A few years back, information managers were known as admin troops and, if you had a good one, you knew the job would get done right … just like Radar O'Reilly, from TV's MASH series, who knew everything going on and could anticipate any office crisis. Today, IMers are communications and information warriors working side by side with our computer systems counterparts, delving into the world of workgroup management and processing information using the newest information technology tools available.

You might ask how a staff support information manager and their "special skill set" fit into the world of the Air and Space Expeditionary Force. The answer is simple. Commanders know that an IMer can get the job done, regardless of the job.

Master Sgt. George Bunch, Air Education and Training Command; and Airman 1st Class Mychael Bulford, Air Force Occupational Measurement Squadron, both at Randolph AFB, Texas, are deployed to an operations center in the Persian Gulf region. They complement staff support and IT using their skills to support the mission.

The operations center is part of Joint Task Force Southwest Asia and charged to enforce the southern "no fly zone" over Iraq as part of Operation Southern Watch, and to direct the war against terrorism in Operation Enduring Freedom. Bunch and Bulford are assigned to the battle staff performing duties a little out of the norm for an information manager, but still under umbrella of staff support specialists.

The emphasis on what they're doing is not completely staff support work. They integrate members of the combat operations staff. Upon arrival at their deployed location, Bunch and Bulford were assigned to the combined forces air component

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management team, myself at the air staff and the functional managers at MAJCOM, FOA, DRU and installation levels, work closely with senior leaders and program managers to monitor for changes which can or will impact the career field. When we identify where a change is impending, the key to success is to adapt … whether it's utilization, training or development … to meet the demands of the mission– whenever or wherever.

To make the best of your career and make your career field the best, I challenge each of you to develop and adopt some guiding principles when it comes to dealing with change. As for me, I've found the simple but powerful tenets articulated by Spencer Johnson, M.D., in his national best-seller, "Who Moved My Cheese?" to be invaluable:

1. Change happens: In life …in the Air Force … in our career field … change will occur.

2. Anticipate change: Because change happens … expect it … don't be surprised by it.

3. Monitor change: Stay in touch with your base functional manager … get familiar with your CFETP … pick up that newly revised AFI … and see what's changed or what's changing.

4. Adapt to change quickly: Move out … because, as Will Rogers once said, "Even if you're on the right track, you'll get run over if you just sit there."

5. Change: It's optional … right? Wrong … and if you don't think so then consider that the only place you'll likely see a dinosaur is in a museum … don't become irrelevant because you're unwilling to change.

6. Enjoy change: Sounds hard, huh? It is … and is probably counter to human nature … all the more reason we must work at it. As I like to say, "Attitude determines altitude" when it comes to achieving success.

7. Be ready to change quickly and enjoy it again: OK … take items 1 through 6 and add them up … and what do you have? 21? No! You'll have a strong foundation for taking change in stride.

Have I mastered each of these objectives? Absolutely not! But, by being aware of and applying these and other such principles, each of us can better serve the changing needs of the Air Force mission. After all … that's why the Air Force has information managers … it's what we're here for … it's our job … it's what we do.

Adaptability key for IMers

By Tech. Sgt. Harold E. Smith Jr.
852nd Munitions Support Squadron
Buechel AB, Germany

Today's 3A information manager has to be a very versatile person. If the 3A career field had a mascot, it would be a chameleon. Ninety percent of IMers are assigned outside the mainstream communications community, working for non-3A supervisors. The vast majority of them reside in one-deep positions in support of other career fields. We not only support the units' missions from a pure information management aspect, but we augment special positions in every Air Force specialty code we support.

During my 13 years in the Air Force, I've supported intelligence, communications, security forces, and munitions maintenance units at the division, group, wing and joint levels. IMers should take advantage of the diverse assignments inherent to the IM career field by learning more about the myriad career fields we support and how we fit into the big picture. In this way, we can implement the good and learn to correct the bad.

Currently, I support the 852nd Munitions Support Squadron at a geographically separated unit. My major duties include NCO in charge, IM, assistant postmaster and custodial agent augmentee, or CAA.

The IM work center supports everything from visual information to the computer help desk. On any given day you could see us working on publishing management (operating instructions), filling in as postmaster, replacing power supplies on computers, posting as a CAA, controlling access to an aircraft shelter, or taking official photos of quarterly award winners.

My wife's friends are constantly asking her, "What exactly does your husband do? I saw him in the post office one day, then I saw him fixing my husband's computer the next." My wife is constantly correcting them when they mistakenly identify me as the "postmaster/comm-computer guy." The good thing about being an IMer is the diversity of duties. Think about it. What is information? Pretty much everything!

This diversity can make it easier to receive recognition, just on sheer productivity. If you continue to apply improvement techniques (what we learn in airman leadership school) and a lot of hard

Tech. Sgt. Harold E. Smith Jr., works on a computer.

work, hours and dedication, good things will definitely come your way. You don't really have to be the smartest person in the world – all you need is a good work ethic.

Another good thing about being an IMer can also be its challenges. Because the career field is so diverse, IMers typically have myriad tasks on their plates. My thinking on this is simple: Take advantage of this wide range of opportunities to excel and "make great things happen." I learned this philosophy from one of my previous supervisors, an outstanding NCO. In order to do this, you must push yourself and accept challenges–especially when you don't think you can. This is critical, but dangerous. It is like the old cliché: There's a fine line between being deemed a genius or a nut. You tend to be either hounded or praised. In the end, accepting more challenges and duties than the next guy has worked for me.

Since the realignment of the old 702 career field, many in the Air Force who are unfamiliar with the updated 3A0 career field are unclear about the appropriate way to employ their IMers. Top IM leadership across the Air Force is aware of this issue. We IMers in the field are painfully aware. Many non-3A0 supervisors routinely assign IM duties that clearly fall under other AFSCs (e.g., personnel tasks, technical order distribution officer, etc.). We all know cases where it's necessary to assign personnel duties that may not completely "fit" with their AFSC – for instance, when the unit has no billet to perform a particular function or perhaps must augment another work center. For example, many orderly rooms are manned with

commander Watch, or CFACC Watch, the hub for all information transiting the area of responsibility. Whether information flowed by phone or e-mail, Bunch and Bulford ensured the right information got to the right people.

This duo used their computer skills to build reports accounting for all sorties flown in support of OEF and all ordnance expended. To ensure this information was accurate and immediately available to the battle managers, this highly flexible team built situation reports using the latest information technology in the information battlesphere environment system known as the theater battle management computer system.

Using their skills as WMs, they built a secure Web site to provide commanders and the operations staff a single information site for all information to facilitate decision-making for the warfighting commander. This information is now at the fingertips of those commanders.

You would think that these duties would keep anyone busy 24/7, but Bunch is also the superintendent of combat operations. In this capacity, he is responsible for the welfare of all the nearly 100 enlisted people assigned. Working as the enlisted advisor to the director of combat operations, Bunch advises him about matters affecting the enlisted force. Working long hours and supporting around-the-clock operations at the battlestaff and CFACC Watch, Bunch ensures everyone works as one team to accomplish the mission.

When Bunch and Bulford deployed from Randolph, they had no idea what role they would play in the AOR. Don't call these guys admin troops or even IMers–call them communications and information warriors ... supporting operational decision-makers with the right information at the right time. They integrate emerging technologies into information and workgroup management functions using network resources, regardless of media, and ensure effective and efficient management of information and strategic resources across the air and space force.

Navy Capt. Mike Spense, director of the operations center, said both these comm warriors "coordinate the daily presentation of information from which CJTF-SWA makes critical warfighting decisions. In addition, these two outstanding airmen are an indispensable link in the chain between JTF-SWA and the outside world."

While deployed, Bulford was selected for promotion to senior airman below-the-zone. He's one of our future leaders in the IM career field, leading it into the future.

Yes, the Radar O'Reillys have evolved, but they still have their hand on the pulse of an organization ready to do whatever it takes to ensure success. Next time you're out in that sand in the area of responsibility, look around at all those footprints. I guarantee communications and inforamtion warriors' footprints are there. Theirs are the footprints that are smeared, because information is critical in a warfighting arena, and they're in a hurry to ensure it gets there.

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personnelist and information managers. Customers don't know or care who's responsible for what; they just want the support they deserve. In a two-person orderly room, the information manager may back up the personnelist, and vice-versa. If the personnelist is the ranking member, the personnel side of the house may become the "priority." Thus, the IMer becomes a personnelist by default and blurs the personnelist's and IMer's areas of responsibility.

So, how should supervisors employ their IMers? First, you need to know what they're specifically responsible for. Start with the career field education and training plan, or airman classification, or Air Force manpower standards, and any instructions approved by your leadership. Make sure your local or (even MAJCOM) instructions don't contradict Air Force instructions or guidance, and are coordinated by each AFSC functional manager involved prior to creating instructions. If you want something done, give it to an IMer who will more than likely, based on his/her knowledge and connections, get it done. If each squadron were a computer and each wing a network, IMers would be the computer processors in each computer managing the information being processed.

It's almost as though when DOD created the Air Force model they forgot to add the glue that ties and holds all the parts together–thus, the modern IMer concept was born. I'm an information manager and I wouldn't have it any other way. I love being an IMer and I and all IMers everywhere will continue to make great things happen.

What in the world happened to the '702'?

By Chief Master Sgt. Betsy J. Gips
3A Career Field Functional Manager
Air Force Space Command
Peterson AFB, Colo.

What in the world happened to the 702XXA (admin comm), 702XXB (staff support), and 702XXC (orderly room) administrator of years ago? Did they transform into butterflies and fly off into the wild blue yonder? Some might say they did, but as most of us know, in 1993, the Air Force administrator was redefined as an information manager, or IMer, and redesignated under the 3AXXX AFSC. The career field underwent further change, when in late 1996 it integrated with communications-computer systems to form communications and information management. Functional management of the IM career field moved out of the mission support squadron into communications squadrons across the Air Force, bringing a force of more than 13,000 active-duty IMers to the fight.

So why all the change? In October 1994, the SECAF and CSAF directed a study on the integration of SC and IM at all levels of the Air Force to determine if such integration would provide better support to the warfighter in the 21st century. The goal of the reengineering effort was to ensure decision makers continued to have the information they needed, any time, any place, on demand, and to provide a viable career path for 3AXXX personnel outside the restructured IM/SC organization. One-time and recurring training needs were established, which later evolved into the stand-up of an Air Force workgroup management course at base level and structured OJT training for A+ core hardware and operating system.

In the span of eight years, rapid technology advancement transformed the IMer's life cycle management tool kit. From typewriters, OCR messaging, and banks of file cabinets, to desktop computing, high grade messaging, and Web-based products, the management of Air Force information entered the technology age. The change from administrator to information manager has been revolutionary. The IMer adapted to new media as the stand-alone, paper-based environment of old slowly migrated toward an integrated, collaborative, knowledge-based arena where redundant systems are passé and electronic business processes are the future. During this time, the basic mission of the IMer remained the same—to ensure Air Force information was properly managed throughout its life cycle (regardless of the media) in support of immediate decision-making. What changed was the criticality of information to national defense and the skill set needed to manage that information.

Quality information means the difference between success or failure of military operations. Where does the 21st century IMer fit in? Information managers must gain knowledge of technology. Today's IM airman is taught computer hardware/software, networking, information processing, computer graphics, and client workstation configuration, in addition to life cycle planning, records, pubs, forms, mail management, orders and messaging. These airmen are full of high hopes and expectations, brandishing newly learned technical skills that need only be honed into an IM warrior for the 21st century. Information management NCOs learn about information warfare, file, print, and user management, emerging technologies, electronic records and files, Web pages and Web site management, functional management, and war/contingency operations.

This training arms IMers with the skill set needed to support the flow of information in an Air and Space Expeditionary Force warfighting environment. With these skills and gained knowledge, IMers can redesign and improve business processes before applying information technology. Then, once technology is applied, it can be used to the fullest to delete mundane tasks, increase data accuracy and timeliness, and automate processes. By doing this, the IMer's contribution to the warfighter is undeniable–reduced costs, better information to the decision-maker, and improved mission effectiveness.

The Air Force of the 21st century is powered on information and associated technology, and the IMer is the foundation of managing this critical national resource. These highly skilled men and women are specialized and capable of administering info systems across the air, space and terrestrial communications network. It's our job to develop these airmen and use them in a way to prepare them for the challenges ahead. What in the world is next? The sky's the limit.

AFCA to normalize IT equipment management

By Master Sgt. Ed Ferguson
Air Force Communications Agency
Scott AFB, Ill.

The Air Force Communications Agency is leading an effort to normalize the management of information technology equipment (formerly referred to as automated data processing equipment). The first piece of this effort is the migration from the information processing management system to a new Web-based module of the Air Force equipment management system called information technology asset management. The migration is scheduled to be completed June 30.

"When this action is completed it will provide the Air Force and its major commands with greater visibility into information technology investments, and provide greater opportunity for senior leadership to influence the allocation of these investments," said Robert Jones, AFCA logistics management technician and lead command OPR.

"AFCA, in conjunction with the Air Staff, MAJCOM representatives, Mission Support Group and Standard Systems Group, are not only actively working the migration to ITAMs, but also assisting Defense Logistics Agency with the requirement to assume management of the re-use and disposal of IT equipment from the Defense Information Systems Agency," he said.

The new AFEMS ITAMs module will provide Air Force equipment managers with consistent ways of handling equipment from acquisition to disposal throughout the Air Force. It specifies procedures for virtually all aspects of equipment handling and record keeping. On a daily basis, managers can authorize, account for, and report on the distribution of equipment on hand. In the long run, the system allows equipment managers to determine the kinds of equipment needed for different missions. These records help form a basis for budgeting and purchasing programs for the Air Force. The new ITAMs module of AFEMS will be built around the Global Combat Support System-Air Force integration framework, which will facilitate the ability to exchange information with other Air Force systems built to the same framework. ITAM will use GCSS-AF IF services, including the Air Force Portal. Complete Web-based application componentization will allow for re-use capabilities for commodities extending beyond IT assets.

AFEMS is a relational database management system that provides online visibility of requirements and asset data worldwide. It provides the capability to update selected information, such as recommending allowance changes, automated SBSS update transactions to include initiating redistribution actions and providing redistribution orders for vehicles and other excess base-funded assets. AFEMS also provides online visibility of allowance data, sends e-mail notices to advise equipment managers of changes and required actions and calculates and reports depreciation for capitalized assets in accordance with statements of federal financial accounting standards.

AFEMS is being incrementally modernized into a GCSS-AF compliant architecture. Currently the AFEMS architecture is a multi-tiered system with a portion of the application residing on a GCSS-AF integration framework tied to the legacy IBM mainframe platform. AFEMS is scheduled to migrate to version 4.0 of the GCSS-AF integration framework in fiscal 2003. The application is planned to be entirely off the mainframe by fiscal 2006.

Users of AFEMS have the capability to view data in different media, output data to printers, transfer data to files, receive CBI training, input data online, and manipulate data to satisfy unique user needs. The AFEMS help screens provide detailed log on/log off procedures, an explanation of each function, and how to use the functions. With the migration of the IT data to the AFEMS platform, IT custodians will enjoy the same capabilities as other Air Force equipment custodians and reduce their manual workload. The decision to migrate the IT data to AFEMS becomes a win-win situation for all custodians, as well as the Air Force as a whole, because this action consolidates the property management systems, eliminates duplicate accountability, standardizes asset management processes across commodities, streamlines the business process and is Chief Financial Officer Act-compliant, Web-based and on the portal. AFEMS will provide asset visibility from acquisition to disposal.

IMers: measuring success through data

By Tech. Sgt. Shane Flint
354th Comm Squadron/SCX
Eielson AFB, Alaska

What happens when the base network goes down? Sometimes people go home. As funny as this may seem, it's definitely true. We live in the information age and Eielson AFB is no different. Look around and you'll see that everything we do revolves around information. Though we're all guardians of this vital info, the delicate task of organizing and manipulating this data falls on the shoulders of the 354th Fighter Wing's 72 information managers.

How critical are IMers and how hard do they work? How can their success be measured? At Eielson, IMers have found a way to measure work and how they impact their units, the users of the unit and the data they need to accomplish the mission, but it hasn't come easy. Training the IM force and educating base leadership have proved to be challenging, but in the end it has led to the success of the Eielson IM program.

IMers pull all the facets of the career field into their day-to-day jobs and while deployed. They focus on two of the IM 3AO career field's core competencies – workgroup management, or WM, and records management – and have found a way to measure how successful they are in each program.

After Eielson completed a Pacific Air Forces' unit compliance inspection in July, inspectors announced that Eielson had the "best workgroup management program in PACAF." The training program and local wing instruction laid the groundwork for an outstanding WM program. Eielson's information managers have established solid WM programs in every squadron and detachment on base, and have empowered units to maintain all the information systems equipment from the wall jack out, and manage all their user access groups and user accounts.

How do information managers quantify their work? Every month, Eielson IMers document all WM-related tasks they do. Each task is categorized into either **user induced, configuration, network**, or **virus** and then reported to the comm squadron at the end of the month. They are consolidated and briefed to the wing leadership on a quarterly basis. In the first full year of tracking, IMers were responsible for closing out 16,786 trouble tickets at the unit level. Those calls nor-mally would have swamped the comm squadron's help desk. With the amount of calls reduced at the help desk, it allowed the network control center to put more personnel in places where help is needed, which created a win-win situation for both the comm squadron and all the network users.

Managing information through its life cycle is a challenge for all IMers considering the massive amounts of information stored electronically. An aggressive electronic records management, or ERM, program was instituted at Eielson to combat the rise in unmanaged electronic information. With the installation of a storage area network, this allowed the comm squadron to set up an area specifically for electronic records that was backed up with the capability of quick restore if information is lost. An electronic records share was created for each unit that is managed by its IMers, who control the permissions to ensure appropriate people have access to the information. Users have an electronic inbox shortcut on their PC that allows them to place official records directly into the ERM directory. The unit's IMers train their records custodians to manage their files, and to place the information into the proper file plan that was generated in RIMS, allowing for quick storage. The information immediately becomes secure, and fear of losing the information is minimized due to the backup capabilities. The benefits of the ERM program were not truly recognized until a full year of information was collected on the use and amount of data stored. During the first year alone, the amount of official records went from 2.3 gigabytes to 103 gigabytes of official data stored – an incredible increase over one year and a true measurement of success of the ERM program.

With different challenges that information managers face every day, it is hard to put a price on what an information manager can do for you. At Eielson, the value of the IMer's outstanding workgroup management has definitely made a positive impact on the network control center by reducing the number of problems that must be elevated to their level. Commanders in every squadron see the value of their vital information being stored and secured, ensuring mission success. Without information, and without IMers managing it, we might as well all go home. If you would like a copy of Eielson's training programs or wing instructions, call DSN 317-377-1460.

Electronic records management: new AF culture

By Senior Master Sgt. Christine C. Bethea
Air Combat Command
Langley AFB, Va.

What is electronic records management, or ERM, and why is it important? In everything we do across the Air Force, nothing is more vital than having access to the right information when you need it. Gen. Hal M. Hornburg, ACC commander, addressed his headquarters staff in January about culture change and the necessity for transforming to improve the way we conduct our Air Force mission. He defined transformation as, "change that occurs at the molecular level." He added that we should transform to help us focus on what is important, to do our jobs better and to achieve mission success. ERM is one culture change for the Air Force entity. The ERM transformation has to first occur in our mindset. We should examine our views of Air Force records, our personal responsibility to maintain them, and our role in making the best use of the most critical technology in the Air Force, our network.

In March 2002, DOD Directive 5015.2 updated our responsibility to ensure life-cycle management (creation, maintenance and use, and disposition) of information as records in all media, including electronic.

"At every Air Force installation, Air Force members conduct daily business via an Air Force computer or network," said Brig. Gen. William T. Lord, the ACC CIO. "Every day, we use e-mail, Web pages, applications, network shared drives, and the Internet, to name a few. Information created with these assets is Air Force information, and if it supports decisions made within the organization, it is an AF record that must be maintained through prescribed information life cycles." When we create, access, move, or disseminate information via the network, we are conducting Air Force business and supporting decisions for our organization. We must maintain records of these transactions to document our actions.

"As airmen, we're responsible for ensuring records are maintained and disposed of in accordance with records management, or RM, directives, which are based on federal mandates," the general said. "ERM means applying RM principles to the electronic environment."

The RM directives provide us with guidance on how to properly organize, maintain, and dispose of records. Some say the existing thousands of RM decision logic tables are a nuisance in the electronic environment. Arguably so, but no Air Force organization uses all of them. They were designed to cover every imaginable document created while conducting Air Force business.

On the network, there is a construct for applying the ERM process at every Air Force installation. First, we must designate an area of the network specifically for ERM. This area should have a common look and feel so when we move from job to job–as is the nature of our military–there is a consistent and recognizable method for ERM. Next, the base RM must coordinate with the network communications center to establish an electronic folder for each unit and assign permissions for the unit's functional area records manager, or FARM. The NCC will assign folder permissions via the RM channels. The FARM will create a folder for each office of record within the unit and coordinate permissions for its chiefs and records custodians, or RC. As the chief of the office of record establishes business rules to maintain the ERM structure, the RC will create folders for electronic files based on an approved office file plan. Last but not least, all Air Force members at every level must use their file plan and ERM business rules. Instead of filing to your computer hard drive or an unmanaged shared store area, promptly file the documents in your office's ERM folders. Why? Ultimately, it allows a coworker or your boss access to official documents in your absence … and it's the law.

ERM is a manageable cultural change. We'll see this transformation in a new view of AF records and in the discipline to capture decisions at various functional organizations and levels. What's the most important document? It's the one that you or your boss needs *now*. So what happens if you can't locate it or you're not in? Aside from the law, it's another good reason for keeping Air Force records in a systematic way. ERM enforces a periodic review of documents in accordance with business rules and disposition schedules. Sound ERM application also reduces the infinite growth of your server storage requirements, and on the Air Force's robust network, effective ERM ensures our individual readiness.

ERM implementation info is online at: https://wwwmil.acc.af.mil/sc/scx/scxp/recordmanagement/ERK.html

ERMS proves elusive

By Capt. Giorgio Cabrera
Architecture and Interoperability Directorate
Air Force Communications Agency
Scott AFB, Ill.

The electronic records management system, or ERMS, has proven an elusive quarry. On the surface it seems to be a simple endeavor. However, once the layers are peeled away, you begin to realize this is a massive undertaking. A true ERMS solution is not as simple as putting electronic documents into a folder on your server – it's much more than that. A successful ERMS solution would touch every desktop application and Air Force automated information system that generates records.

AFCA is currently working its third pilot effort since beginning the ERMS journey in 1998. The knowledge gained from these pilots is priceless. Some say the electronic records management industry is still challenged. Others believe the DOD standard forces paper practices into the electronic frontier, and that the standard must be reevaluated. Either way, we are sharing pilot project lessons learned with all the ERMS players.

Any system adopted by the Air Force must comply with the DOD Directive 5015.2 standard and be Defense Information Systems Agency Joint Interoperability Test Command certified. While the requirements are extensive, they focus on paper-based methods. Two of the many features our ERMS solution must include are: document modification restriction once it is declared a record, and the ability for a records manager to locate and retrieve the file regardless of its location. In addition to all the DOD-level wickets, the Air Force architecture calls for a Web-based solution for all new applications.

The directed requirements listed in DOD 5015.2 and the established parameters from Air Force policy are only the beginning. We envision automating the records management function, not just digitizing our file cabinets. Automation will enable the system to automatically file records to the appropriate folders. Otherwise, everyone in the Air Force would have to undergo abbreviated records manager training, which is both cost-prohibitive and time-consuming. In addition, FOIA research would be transparent to the user community, and Privacy Act information would only be viewable by authorized personnel.
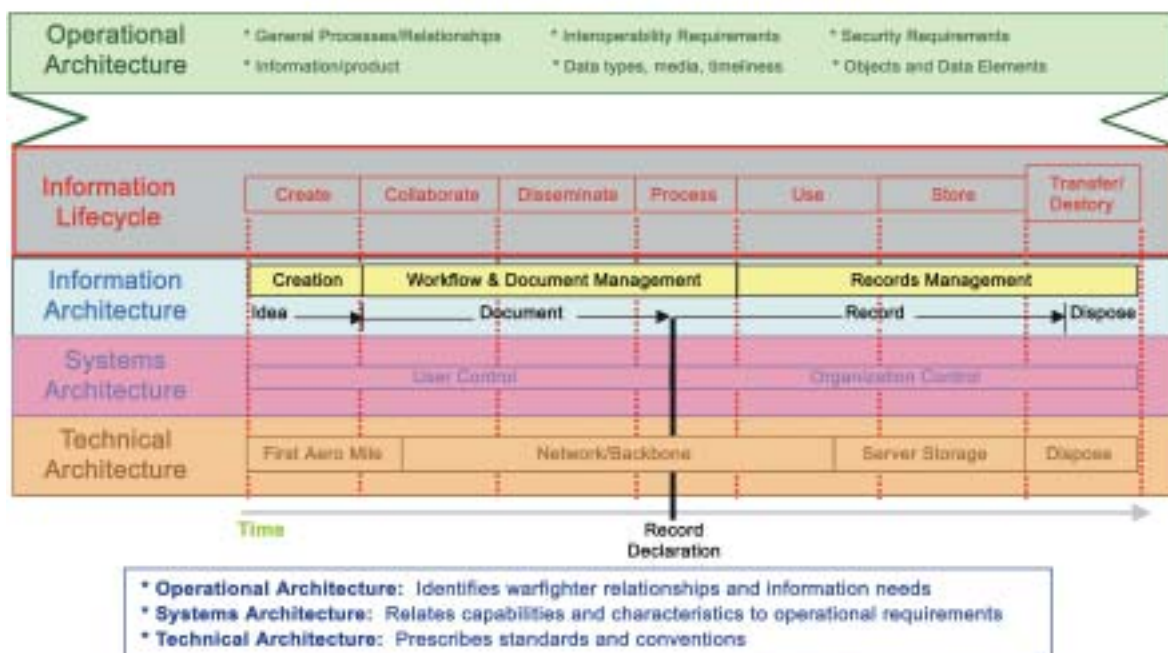

FIGURE 1 – The information architecture will enable controlling the amount of information storage required and address exponential growth requirements for mass storage.

As lead command for the ERMS initiative, AFCA serves as advocate for the customer. ACC, PACAF and AFCA are working to field successful pilot efforts, which will help us collect, determine and validate solid requirements for ERMS. AFCA clearly recognizes the synergistic yield of these pilot efforts.

AFCA Pilot

We are preparing a pilot using the IBM Records Manager, formerly Tarian. ACC, AMC, PACAF, AETC and AFMIA are active participants in the AFCA pilot.

ACC Pilot

ACC is evaluating which ERM products meet their requirements while in-garrison and deployed. After completing evaluations, ACC will stand up a pilot in concert with testing of the active directory.

PACAF Pilot

PACAF is piloting a combination of Microsoft and Documentum products. PACAF records management will probably require a new layer between information lifecycle and systems architecture. This layer, called the information architecture, will enable controlling the amount of information storage required, and will address exponential growth requirements for mass storage. The layer would look like the image in Figure 1.

Official records would be properly preserved, but with version control, deleting frivolous materials and the ability to identify duplicate documents on our system, we can preserve the mass storage system as well. PACAF has installed a combination of Microsoft products and Documentum, each serving a role in the information layer. The creation will be by any of the Microsoft suite products. The work flow piece will be handled by ConnectPoint (developed by PACAF CSS) and the document management portion will be handled by Microsoft SharePoint. The records management solution is the final piece, and we are working with Documentum ForeMost to manage our official e-records. The PACAF EIM solution
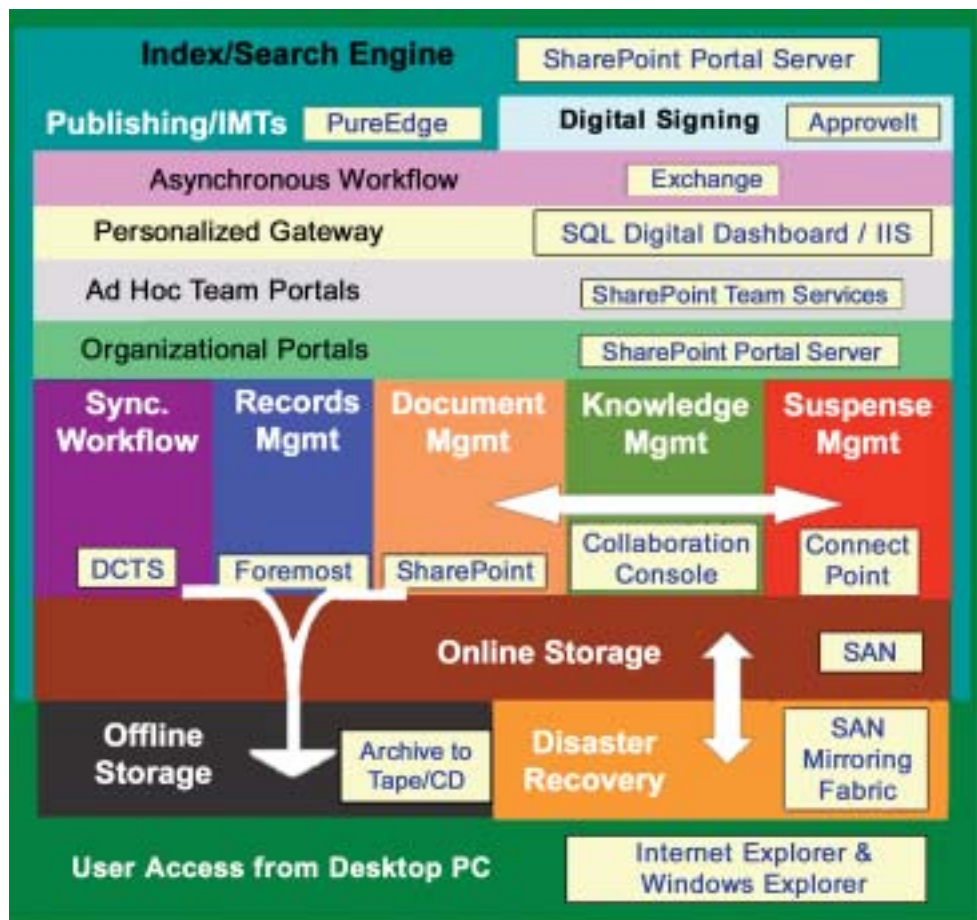

FIGURE 2 – Graphical representation of the target PACAF EIM solution.

would be as shown in Figure 2.

In our sight picture is a user-friendly ERMS solution that complies with applicable laws on the books. The efficiencies of this type of system are hard to see from within our current records management paradigm. When all is said and done, Air Force records management will track usage rates across the enterprise and rescind outdated tables and rules. For example, we might be able to do away with Air Force Manual 37-139, Table 33-26, Rules 1-10 in part or entirety. The 10 disposition rules in this table concern computer punch cards and paper tapes.

For more information on the AFCA ERMS pilot, contact Linda Miller at (618) 229-6900, DSN 779-6900 or e-mail her at linda.miller@scott.af.mil. Information on the ACC and PACAF pilots is available respectively from Karen Murray at acc.sccrmo@langley.af.mil; and Senior Master Sgt. Amaziah Dominic at (808) 449-4773, DSN 315-449-4773 or amaziah.dominic@hickam.af.mil. You can also contact Master Sgt. Carl Hoffman about the PACAF pilot at (808) 449-4603, DSN 315-449-4603 or e-mail him at carl.hoffman@hickam.af.mil.

EIM: a common integrated environment

By Lt. Col. Brian J. Magers
*Chief, Enterprise Information Management
HQ USAF Directorate of Communications
Operations, Plans and Policy Division
Washington*

Today Air Force personnel are forced to deal with myriad data and information sources, i.e., multiple e-mail inboxes, telephone, hard-copy mail, meetings, multiple tasking systems and processes, multiple versions of electronic and hard-copy records, etc. – all this while reacting to the crises of the day. Many organizations from Headquarters Air Force down to the squadron level have implemented differing processes and systems to deal with this blitz of information and tasks. In this environment, before members can become fully productive, they must learn a new process or system nearly every time they change jobs. The Air Force's current operations tempo does not afford personnel the time to reinvent good processes, much less sit through week-long courses. For the most part, this situation results in terabytes of electronic and countless hard-copy pages of unorganized files and records, as well as an Air Staff unable to easily share and flow information to subordinate organizations. Therefore, the Air Force requires a centralized and integrated approach to managing information.

In comes enterprise information management.

En·ter·prise - **1.** An undertaking, especially one of some scope, complication and risk. **2.** A business organization. **3.** Industrious, systematic activity, especially when directed toward profit: *Private enterprise is basic to capitalism.* **4.** Willingness to undertake new ventures; initiative.

In·for·ma·tion man·age·ment - The planning, budgeting, manipulating and controlling of information throughout its life-cycle (e.g., creation or collection, processing, dissemination, use, storage and disposition).

The Air Force concept of EIM is being defined as an environment where an Air Force member will be able to log in to any workstation anywhere in the world using their same user name and password. Once logged in, they will be presented with their personal view into a system using the same set of tools with access to the same files and records independent of location.

This common set of tools will provide the capability to centrally manage all Air Force information products using Web technology. EIM will have the ability to draft, track, search and locate information products and records stored throughout the Air Force. Some of the discussion has gravitated toward specifying products. The Air Staff believes a better approach is to develop a business capabilities strategy that transforms islands of automation into a complete interoperable "business" environment, where users plug into and out of capability seamlessly. To accomplish this, EIM will provide the following office tools:

* *Workflow/suspense* – The automation of a business process, in whole or in part, during which documents, information or tasks are passed from one participant to another for action, according to a set of procedural rules.

* *Document management* – Document management maintains and organizes the electronic information introduced during the workflow process. It manages documents in central locations, controlling access to these files, keeping a history of activity and changes to the managed documents and allowing users to search for documents.

* *Collaboration* – A process of exchanging communications between group members. Collaboration tools include electronic shared white boards, chat rooms, virtual conferencing facilities (audio and video), various facilities that allow users to share applications or maintain parallel views of data, and software frameworks that tie all of these functions together.

* *Electronic publications* – Enables product development and service delivery to the end user, regardless of media, at the time and location needed.

* *Information management tool* – The next generation of forms and forms management for the AF.

* *Electronic records management* – Precisely storing electronic records to comply with all legal and regulatory requirements. Every record must be assigned a disposition that determines how long the record must be maintained and when it is ready for destruction or permanent storage.

There has been a lot of discussion on how the Air Force can provide an integrated EIM capability to the entire Air Force enterprise. The deputy

OJT

Tech. Sgt. Lori A. Morgan (left) learns help desk procedures from Staff Sgt. Tina J. McFadden at Camp Justice, a forward-deployed location supporting Operation Enduring Freedom. When not activated, Morgan is an active Guard/ Reservist and McFadden is a quality assurance engineer with a computer company. Both Air National Guard members are from the 267th Combat Communications Squadron at Otis ANG Base in Cape Cod, Mass. They are deployed with the 321st Air Expeditionary Group.

Photo by Staff Sgt. Cheresa D. Clark

EIM
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chief of staff for Installations and Logistics, AF/ IL; deputy chief of staff for Warfighting Integration, AF/XI; chief information officer, AF/CIO; administrative assistant to the Secretary, SAF/AA; Installations, Environment and Logistics, SAF/IE; Electronic Systems Center: Air Force Tech Data System Program Office MSG/MM and the Air Force Communications Agency, AFCA, are teaming to establish a focused effort toward realizing EIM for the Air Force.

In general, AFCA has programmed resources and collected Air Force requirements. AF/XI will vet the requirements through the Integration Architecture Council develop the architecture and serve as the requirements POC to MSG/MM. AF/ CIO will have oversight and approval of the EIM requirements and architecture. MSG/MM will serve as the program management office to acquire and develop the EIM system for delivering the capability to the Air Force. AF/IL will ensure the EIM system works in support of day-to-day operations, implement appropriate training to operate

this system, and staff and sign the service level agreement with MSG/MM based upon the approved requirements. SAF/AA will work with MSG/MM to deliver the IMT and electronic publications capabilities. SAF/IE, in its capacity as representative to the Business Initiative Council, will bring best business practices from corporate America into this effort.

The EIM vision is to empower users to post, exchange, collaborate and coordinate information in a fully integrated, seamless enterprise Air Force-wide environment to accomplish day-to-day Air Force missions.

EIM is long in coming but will serve the Air Force well by combining and strengthening integration of the information management processes. This system will provide us a way to work so that from the sensor, to the command and control authority, to the shooter, there is real-time information, and every possible node has the same information at the same time, while minimizing the man-machine interface. EIM is an ambitious effort, but the HAF is rallying around it and working hard to bring all the right elements together to make it happen.

"Data Overloaded, Information Starved" → Roadmap → Right information to the right person at the right time

Beale network control center program instills confidence in new IMers

By Senior Master Sgt. Kevin Call
9th Communications Squadron
Beale AFB, Calif.

The folks at the 9th Communications Squadron's Network Control Center, or NCC, at Beale AFB, have developed a workgroup management/information management immersion program for all newly assigned 3A0 personnel that has left a lasting impression on them as well as their supervisors and customers.

"I felt very confident reporting to my new unit knowing that I can begin working and making a difference," said Airman Basic Felicio Flores, 9th Maintenance Squadron.

New information managers now have the opportunity to work and train side-by-side with NCC help-desk personnel for 30 days when they first arrive.

"Airmen tour the NCC and attend briefings given by each functional area to learn how each area fits into a cohesive network team," said Master Sgt. Tony Wallfred, help desk superintendent. "Each airman gains a deep understanding of how they will complement this team when they arrive at their units and how they will help protect the network."

Wallfred assists Senior Master Sgt. Kevin Call in ensuring this newly implemented program stays on track. The training begins with and emphasizes proper telephone etiquette as the airmen start fielding calls from other workgroup managers.

"They quickly learn, from experience, what information is required when calling the help desk and how to begin troubleshooting problems," said Wallfred. "At first the airmen are very reluctant to answer the phone, but they quickly gain confidence."

The training continues with each individual completing the first 17 of 69 computer-based training courses required to obtain WM rights on Beale's network. Each airman also attends classroom hardware and software familiarization courses at Beale's network training center, or NTC.

Staff Sgt. Eric Sparks and Staff Sgt. Pedro De La Cruz, NTC trainers, ensure airmen are trained

Airman Felicio Flores, 9th Maintenance Squadron, works on a computer.

and signed off on core tasks in the 3A job qualification standard.

"It's a great feeling knowing that I am training the future experts in the field," said De La Cruz. "They are all very motivated and anxious to get to their units and start making things happen as new workgroup managers."

Each airman attends training sessions and is provided one-on-one instruction on how to use the user manager, exchange manager, and server manager programs. Each learns to create network and exchange accounts, set-up individual Outlook client profiles, assist with small computer maintenance, and configure Windows 2000 workstations. Airmen are given training on using and installing FormFlow and PureEdge IMT Viewer software and are familiarized with the Air Force e-publishing Web site. They also receive Microsoft Word, Excel and PowerPoint training that includes simple tricks and shortcuts.

Not forgetting the roots of the IM career field, airmen complete records management, FOIA, and

ETVS replaces outdated ATC comm console

By Senior Airman Anthony J. Santistevan
Ground Radio Maintenance Journeyman
354th Communications Squadron
Eielson AFB, Alaska

Technological change doesn't affect just computer systems and servers. Great strides are also being made in the realm of voice transmission. The enhanced terminal voice switch, or ETVS, AN/FSC-127, is the newest and long-awaited replacement for the outdated OJ-314 air traffic control communications console. The replaced OJ system had been in service approximately 15 years. The ETVS is able to handle 480 channels in any combination of landline, intercom, or radio circuits, and will facilitate up to 80 different operator positions. The ETVS is capable of accomplishing everything the old OJ system could with the exception of the request/acknowledge unit. However, this unit can be removed from the old OJ console and integrated into ETVS. ETVS has done away with the need for circuit redesign – it's now a plug-and-play system.

The ETVS system drastically improved operator positions, negating many of the OJ system shortfalls. Instead of the hard key setup, a programmable touch screen, called a touch-entry device, or TED, is the Air Force standard. TEDs greatly reduce the man-hours required to maintain the operator positions. For example, there is no need to change little light bulbs (up to 120 per console), it minimizes the amount of space needed,

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BEALE
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Privacy Act training and are instructed on how to install and navigate through the RIMS software. They receive publishing training to familiarize each individual with local procedures and to expand on what they have already learned in technical training school.

Personnel are then assigned to the base information transfer center, or BITC, for two days to learn about BITC and assist with base distribution runs.

"What a great idea this has been," said Master Sgt. Elisa Ceaser, chief, base administrative communications. "With BITC being outsourced at Beale, it's critical that we get as many airmen trained as possible. They may never get another chance to work in BITC."

Additionally, they learn mail metering and document security functions. Upon completion, members are task certified in the areas of BITC, activity distribution office, activity action office, and document security.

During this process, each airman receives an individual training record and career field education and training plan, with many 3A0X1 core task items getting signed off. Upon completion of the 30-day program, airmen are awarded workgroup manager rights and receive certificates of training in records management, hardware and software

Airman Belinda Robbins, 9th Maintenance Squadron, receives a certificate of training from Senior Master Sgt. Kevin Call.

instruction, and a certificate for completing the immersion program.

The immediate benefits realized from this program are that the airmen build a close working relationship with the help desk and arrive at their unit trained and ready to work. This leaves a lasting impression on both the airmen and their unit.

"This program has definitely enabled a smoother transition for me into my new unit," said Amn. Belinda Robbins, 9th MS.

Information managers: combat communicators

By 1st Lt. Brian D. Aschenbrenner
32nd Combat Communications Squadron
Tinker AFB, Okla.

Life as an information manager in the 3rd Combat Communications Group, more affectionately known as the 3rd Herd, is as diverse as it gets. IMers are responsible for far more than just mastering traditional staff support and workgroup management roles. As combat communicators, they each must evolve into a truly versatile person.

Third Herd IMers realize they are in a different world the moment they in-process into the "oldest, biggest and best" combat communications group in the Air Force. They immediately see that the group is in a constant cycle of training, combat-readiness exercises and real-world deployments. These troops say goodbye to the freshly pressed blues, climate-controlled offices and hello to protective safety gear, living and working in a tent, and spending long days maintaining combat readiness and providing information services to warfighters.

The Herd's IMers still perform traditional roles of staff support and workgroup manager, or WM. However, they provide quality staff-support services to flight, squadron and group leadership. They are also responsible for a full spectrum of help desk services and for managing automated data-processing equipment accounts, as well as a host of additional duties.

In the Herd, we all know that excellence doesn't happen by accident. IMers must demonstrate their excellence through combat readiness. At the top of each in-processing checklist are vehicle and weapons qualifications and combat communications readiness school, or CCRS. IMers learn to drive large, M-series vehicles with various tow loads—a required skill that ensures they can transport equipment anytime and anywhere the mission requires.

They also learn to handle weapons and gain a new appreciation for the term "center of mass." CCRS is a proving ground and a rite of passage for every member of the Herd. Attendees are introduced to the finer points of command and control while operating in a hostile combat environment. They learn to fight as a team to defend tactical communications and air traffic control assets.

Some IMers, like Staff Sgt. Hugo Padilla, 34th Combat Communications Squadron, learned these lessons so well they have gone on to become associate instructors in CCRS. Other IMers have crossed over to serve on the Herd's aggressor force, the "Wolf Pack," putting combat tactics to the test to ensure each class is ready whenever duty calls.

Once the training basics are out of the way, IMers learn their deployed trade through combat readiness exercises. Despite the current operations tempo, 3rd Herd IMers can expect to participate in one exercise each quarter, offering another opportunity to learn something new. Exercises, 3rd Herd style, start with the air-mobile phase, a labor-intensive process of preparing more than 30 tons of communications equipment for air transport. IMers don their protective safety equipment, build pallets and prepare airflow logistics documentation to precise quality standards–all within a 24- to 72-hour window.

Following the air-mobile phase, IMers convoy to the deployed site, where vehicle qualifications come into play. Upon arrival, they download their equipment and start building tents. Once the tents are ready for occupants, they set up the equipment and start operating the deployed help desk. The help-desk function is a buzz of activity, with IMers busy configuring workstations, building network cables and establishing user accounts, but the tempo seems even more frantic since this is a "deployed" setting.

Back at the home station, IMers are responsible for establishing traditional base information management functions. The Herd has developed a network learning center, or NLC, that prepares each member to perform their wartime mission. Staff Sgt. Chris Ohlemacher, 32nd Combat Comm Squadron, is responsible for providing formal information management training via the NLC to ensure the next generation of Herd IMers is ready for the fight. All this combat-readiness training brings us to the reason the Herd exists – real-world mission deployments.

Senior Airman Clarissa Ayson, 3rd Combat Comm Support Squadron, and Airman 1st Class Ashanta Gamble, 32nd CCS, were among the first 50 troops at their bare-base location in Southwest Asia. They helped build the 444th Expeditionary Communications Squadron from the ground up.

New wartime duties for 'old' IMer

By Staff Sgt. Robert M. Nelson II
*NCO in charge, Information Management
354th Communications Squadron
Eielson AFB, Alaska*

What is the wartime task of a deployed information manager, or IMer? Is it driving a bus as a transportation augmentee, delivering mail with the postal workers, working on a commander's support staff as a personnel specialist augmentee? Not really, but these are the duties an IMer could expect on a routine Air and Space Expeditionary Force deployment or during a real world contingency to the Persian Gulf, Bosnia or anywhere else. Today, the IMer's duties have changed along with how they are used during deployments.

Although a major portion of the IMer's deployed time is dedicated to workgroup management, this is only one example of what we do while deployed.

I recently had the honor to deploy for about six months in support of Operation Enduring Freedom. However, this trip wasn't an ordinary deployment since we walked into a bare base environment. In this type of environment, everyone works together to build up the base and get it operational. During the first few months, you can expect to work 12-20 hours a day, seven days a week. During those long days, you're raising tents, acquiring desks and sleeping cots, or unloading food trucks as they arrive. Of course, this is all done while still supporting the mission.

As an IMer, when you deploy with services, civil engineering or logistics oriented squadrons, you become the communications liaison by default. The IMer is responsible for working with the deployed communications squadron to establish telephone, cell phone, radio, LAN, and computer system requirements to meet your squadron's initial and future needs. As systems come online, you'll spend time troubleshooting computer, network, and telephone problems that may arise.

Staff Sgt. Robert M. Nelson II performs one of his many information manager duties at a deployed location in support of Operation Enduring Freedom.

Access to data and information is critical, and the ideal way to do this is to develop and maintain a squadron Web page.

Reporting to higher headquarters is a daily requirement, so you end up being responsible for gathering inputs, compiling the data and forwarding the squadron's situation reports up through the chain of command. Once everyone is wired, you will have to remember to establish a file plan. As everyone knows, once you get a computer and printer, the paperwork soon follows.

Gone are the days of sending IMers to fill wartime slots they're not qualified for just because an extra body was needed. Today, IMers play a vital role in accomplishing the mission, while successfully putting their peacetime skills to the test on the battlefield. The deployed IM/WMers are essential to every deployed squadron.

WARRIORS
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They built the tents they live and work in, along with another 40 living tents for later-arriving airmen. They drove in grounding rods, dug trenches for fiber-optic cable, established an initial temporary morale phone and Internet access facility, activated a help desk, set up more than 2,000 user accounts, configured numerous workstations and provided network connectivity to nine geographically separated warfighting agencies.

Every day brings a new challenge in the deployed world. Upcoming projects include establishing postal and Internet facilities, and a permanent morale phone. Each Third Herd IMer is multifaceted and provides outstanding services as combat communicators. They engage in the daily routine of staff support and workgroup management while in-garrison, hone their combat readiness skills through formal training and field training exercises, and most importantly, they get the job done by providing reliable communications services to warfighters during real-world deployments. IMers in the 3rd Herd are ready for duty's call – anytime, anywhere.

E-STARS integral to enterprise electronic workflow

By Senior Master Sgt.
Twuana M. Henry
and Master Sgt.
Richard Jenson
*Architecture and Interoperability
Directorate
Air Force
Communications Agency
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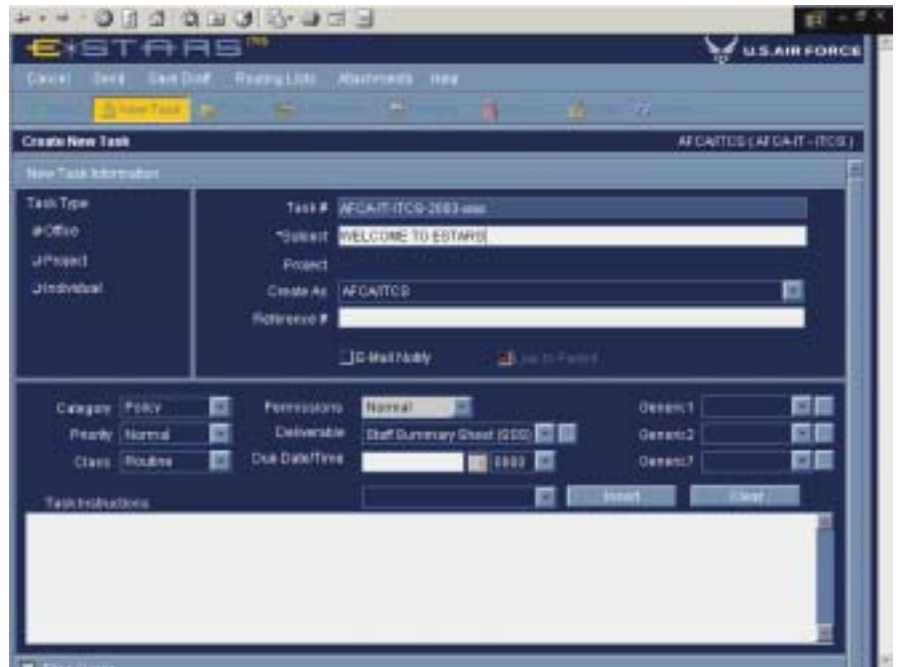
E-STARS screen capture shows the user-friendly Web interface.

"Workflow" is a term that has become increasingly common to Air Force members. The question is, "What is workflow?" Each time a document moves between an originator, coordinator, reviewer or approver, work is being "flowed," whether the medium is paper or electronic. Workflow expedites processing of official Air Force information throughout its life cycle. In today's technology-rich environment, the Air Force constantly seeks new ways to capitalize on the efficiency and effectiveness of flowing information electronically.

Workflow has been performed in many different ways over the last 20 years. In the past, most organizations designated an information manager to track suspenses using a little black box which contained the AF Form 388, Communication Control Record, known as the "blue slip." The blue slip method made it extremely difficult to actually track the progress of a suspense or tasking. Inevitably, this led to late suspenses and inclusion on the "late" slide at the commander's weekly stand-up briefing.

Then about 10 years ago, personal computers started to appear on most information managers' desks and in a large number of work centers. The idea was to provide a tool that could electronically manage the suspensing and tracking of documents generated or received by an organization. Initially, the only software available for tracking purposes was rudimentary Excel spreadsheets or home made databases. E-mail enhanced the tracking process

if the PC was connected to a base network, which enabled connectivity outside of the organization. As e-mail evolved and became standardized to MS Outlook, the quantity of taskings increased, but the management of suspenses had become no more efficient than with the blue slip. While able to verify the intended action officer received the tasking, the ability to track the taskers progress in real-time was nearly impossible. This perpetuated the practice of sending e-mail or telephoning to ascertain the status of the task. Obviously, if a tasking is within your own function, it is easier to verify progress. But what happens when your tasking must be coordinated through three or four levels of management and returned to you, the originator? Once that folder left your hand, it was free to languish at the bottom of someone's inbox. How about trying to get a staff summary sheet through all necessary levels of management? While tracking a staff package inside your organization can be difficult, it can become virtually impossible when it goes outside your organization. The process of staffing a package through e-mail can also require great effort because, at a minimum, the office of primary responsibility needs proof of coordination, which usually involves compiling numerous inputs – all of which takes valuable time out of an already busy day.

But all is not lost! There is a better way to manage workflow. How would you like a system

E-STARS

that is Web-based, so everyone in your organization can access it? A system that tracks and reports by e-mail when anyone in your routing chain has touched your package? What about a system that can report progress as it happens? Imagine a system that can move the tasker or package from start to finish, archive it as an electronic record for future reference, or make it available for a recurring task? Picture a system that is both intrabase and inter-MAJCOM compatible, and capable of both coordination and approval processing horizontal and vertically. How about a system that isn't cost prohibitive?

Well, the Air Force Communications Agency, along with Lockheed Martin Information Technology, is working to develop the electronic suspense tracking and routing system, or E-STARS. This software can transform an inefficient, cumbersome staffing and tasking process into an easy, efficient process where work truly flows. Once installed at your MAJCOM or base, E-STARS will be accessible by simply pointing to your browser. Think about it: realtime tracking of suspenses, taskers or staff packages. Finally, there will be a tool to make the coordination process as quick and efficient as intended. No more hand-carrying of packages or losing of suspenses in the abyss of someone's inbox, fewer late suspenses, and no more costly stop-gap non-integration with other organizations.

As the interim Air Force electronic workflow solution, E-STARS is capable of communicating across the Air Force enterprise. From a unit deployment manager routing a tasking at base level, to routing a staff package through the Pentagon, E-STARS will ensure the workflow process is completed quickly and efficiently.

The bottom line is E-STARS permits a seamless exchange of information, operates in open systems architecture achieving the highest levels of integration, and improves the effectiveness of military operations through information warfare superiority. This provides leaders rapid decision analysis and increased battle space awareness, and shortens the decision cycle. Continuing to function with non-integrated solutions Air Force-wide perpetuates the lack of timely information flow required to support the warfighter at home and abroad. E-STARS is a system that will improve the way we accomplish the Air Force mission.

For more information, visit the EIM Web site at https://www.afca.scott.af.mil/eim/MainFrame.htm

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ETVS

and shortens the amount of time needed to integrate new equipment or reassign existing equipment to different operator positions.

Troubleshooting problems on the ETVS is much easier too. Virtually every circuit's audio and signal paths have been narrowed down to five groups: operator position equipment, supervisory maintenance, interface, voice/data switching, and power equipment. Ninety-nine percent of problems can be troubleshot down to one of these five groups. The ETVS' antiquated predecessor, the OJ-314, was notorious for odd problems originating from seemingly non-related equipment. The ETVS includes remote terminals, providing consolidated monitoring of all the equipment installed in the ETVS racks and creating a log of all failures for fault analysis.

Preventative maintenance inspections, or PMIs, have also been streamlined with the new equipment. Since the ETVS is microprocessor controlled, it doesn't "drift" out of tolerance as frequently, doesn't suffer from a lack of mechanical parts such as switches and relays, and needs fewer adjustments. A two-man team can start and complete a 336-day PMI in two days, compared to the entire week it may have taken on the OJ-314. There is a downside to this tightly integrated system: Component-level repair is not authorized at the organizational level. All malfunctioning cards need to be returned to the manufacturer if under warranty, or sent off to depot for repair.

The enhanced terminal voice switch is a reliable, easily maintained, and highly adaptable piece of equipment. Smaller operator positions have yielded greater workspace for the air traffic controllers. The time it takes to identify problems and repair malfunctions has been reduced, and the man-hours spent on preventative maintenance can be allocated elsewhere. Capable of integration with nearly every type of landline, ground-to-ground, and air-to-ground radio, ETVS is the piece of equipment to provide your controllers access to the resources they'll need for the next decade.

Photo by Master Sgt. Ed Ferguson

Senior Master Sgt. Walton Morton, Web RIMS project manager, trains Dottie Lanctot (left), AMC's records manager, and Marla Albers, AFCA/ITC's records custodian, on the Web RIMS application.

AFCA releases RIMS 3.0

**By Linda Miller and
Capt. Giorgio Cabrera**
*Architecture and Interoperability
Directorate
AFCA
Scott AFB, Ill.*

Air Force Communications Agency expects its customers to be pleasantly surprised with the enhancements and capabilities of the just-released records information management system, or RIMS, version 3.0, otherwise known as Web RIMS.

As technology evolved, so has RIMS. For the first time, RIMS is more than a mechanism for preparing a file plan. It allows real-time management of the Air Force records program. Personnel can remotely manage training, track staff visits, and document staging processes. Records managers can view file plan data for their area of responsibility at the touch of a button.

It's robust, packed with new features, and easy to use. User accounts have been established, and major command and base records managers will be distributing the Web site.

To ease the transition, Web RIMS uses the same menu structure as the version it replaces.

"We don't anticipate a need to retrain personnel," said Senior Master Sgt. Walt Morton, RIMS project manager. "We designed RIMS 3.0 so that RIMS 2.1 users will be able to use it without additional formal training."

Provisions were made for online training aids and help desk support for new personnel. Users can download an in-depth training guide or access an extensive online help menu. The fully illustrated guide walks users through the process. In addition, the help menu has a tele-

Significant Web RIMS features

New Capabilities
Online file plans approval in real time. No more file plan e-mails for record manager approval.

100 percent Web-based. Web solution will save thousands of man-hours on client software installations.

Real-time records disposition schedule, or RDS, updates. System automatically flags any item numbers in user's file plans affected by RDS changes.

A search engine to facilitate RDS searches.

The Air Force, MAJCOM, and base records managers have online access to file plans across the Air Force for accurate records management training statistics.

Saves manpower and TDY funds associated with on-site staff assistance visits.

Enhancements
Enhanced printing capabilities.

RDS prints out in report form as shown in AFM 37-139.

Imbedded e-mail link and telephone number to the AFCA/ITCR help desk for support.

Online users' training guide.

Web RIMS can determine used and unused tables and rules Air Force-wide. Air Force records officer can better manage the RDS and recommend table and rule deletions when deemed obsolete.

AF publishing: not just paper and boxes anymore

By Lauren Mednick
Air Force Departmental Publishing Office
Bolling AFB, D.C.

When the Air Force publishing community was asked how they planned to take the current publishing program into the 21st century, they simply replied "We're not."

Instead, they took the basic concepts behind conventional publishing and embarked on a journey that would lead them away from the ideas of traditional Air Force forms and publications, and into the world of information management. Today, what we once called forms are now called Information management tools, or IMTs; Air Force personnel worldwide have switched from the JetForm software to PureEdge's IMT technology; and data standardization efforts are underway.

Understanding that to be a part of this new world meant the reevaluation of certain "sacred" publishing concepts, Air Force publishers began to recognize forms as merely "information gatherers," and publications as simply "information providers." The focus became the data, not the vehicle in which it traveled. To make best use of the data and eliminate the duplicity of individual "stovepipe" systems, standardization was a requirement to move forward.

"We're changing our whole approach to focus on content and user interaction," said Carolyn Watkins-Taylor, director, Air Force Departmental Publishing Office, or AFDPO. "The primary goal is to make things easier on the user and easier on the Air Force by replacing an obsolete system. We're taking a content approach rather than just worrying about what the forms or the boxes look like. The IMT technology allows us to do all of this and more."

As lead command for this Air Force-wide initiative, AFDPO started by replacing the current commercial off-the-shelf, or COTS, electronic forms software with PureEdge's Internet Commerce System COTS application.

The PureEdge ICS, an IMT, consists of two COTS desktop products, the IMT viewer and the IMT designer. The IMT viewer is a lightweight (less than 10MB) desktop program that expands on the functionality of the current Air Force forms program (e.g., JetForm FormFlow, allowing users to efficiently view, fill, save, and route IMTs, or e-forms. The IMT designer is a desktop-hosted program that allows IMT designers to create and modify the IMTs that users will view and fill.

Leave No One Behind

The IMT viewer can be operated locally as a stand-alone executable or used as an extension to the user's Web browser via a plug-in. IMTs are "nomadic," allowing users to complete them offline, without a network connection or client-server activity. Users with network connectivity can e-mail IMTs with a simple mouse click, using standard Air Force e-mail software. Users without network connectivity can send the completed IMT via electronic media (CD, floppy, etc.) or print and then

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RIMS
From previous page

phone number and an e-mail link for the Web RIMS help desk and development team.

Web RIMS capabilities will be introduced to initial (3-level) and craftsman (7-level) communications and information trainees at Keesler AFB, Miss.

AFCA redesigned the latest RIMS release to exploit Web technology. This strategy eliminates reliance on client software installed across the enterprise on multiple desktop operating systems. In addition, it preempts future software incompatibility issues associated with desktop operating system updates.

"We feel a Web-based platform residing on a central server offers the best total cost of ownership while providing maximum capability," said Morton. AFCA developed Web RIMS during the past year and a half at a cost of $400,000, according to Morton.

RIMS architectural design uses an Oracle database to store user file plan data and staging area data. RIMS Web pages were developed using HTML and ColdFusion MX. Users will access Web RIMS by a Web browser. The current customer base for Web RIMS is estimated to be more than 80,000 offices of record Air Force-wide.

Web RIMS 3.0 provides real-time management of the Air Force records program. Watch for accessibility coming soon to your base.

For more information, call (618) 229-6900 or DSN 779-6900.

AFCA's Master Sgt. Wayne Repke, U.S. Air Force Computer Based Training Program manager, fills in an AF Form 1297, temporary issue receipt, on his PC using the PureEdge ICS information management tool viewer.

PUBLISHING

add a wet signature and deliver it for processing as hardcopy. IMTs are based in extensible markup language and completely encapsulate the presentation, logic and data into a single, signable, portable object.

"We recognize now more than ever that any modernization program we initiate must include methods of providing our warfighters with an optimal level of support," Watkins-Taylor said. "We are excited at the potential opportunities that this kind of cutting-edge technology can provide, especially when it translates into a more efficient and effective support method."

Additionally, because personnel, medical and financial information will be available globally and around-the-clock, Air Force members will be able to accomplish actions in those areas, regardless of their location.

"In the future, when airmen want to perform personnel or finance actions, they will no longer go to the personnel flight or down to the finance office. They will do the majority of that online, 24 hours a day, with self-service capabilities," said John Gilligan, Air Force chief information officer. "Physical location will no longer be a limit."

A small footprint

The IMT viewer and individual IMTs reside on the desktop and use existing Air Force browser and e-mail applications. The average size of designed IMTs is between 40K and 400K. The IMT viewer can be operated locally as a stand-alone execut-

able, or used as an extension to the user's Web browser via a plug-in. The Web browser plug-in employs an active document server for operation within Internet Explorer (Dynamic Linked Library). Similarly, under Netscape the component operates as a standard plug-in. The stand-alone viewer uses no embedded mobile code and active cookies are not required or used.

The IMT Designer allows designers to create IMTs through a drag-and-drop interface that permits development of business logic (validation checks, calculations, default values, etc.) into the IMT. A drag-and-drop tool for designing XFDL IMTs, IMT designer allows rapid creation of complex, dynamic IMTs. Users select IMT objects from the menu, drag them into position on the IMT page, then open a tabbed dialog to set properties, such as formatting, default values, templates, calculations, and URLs. The IMT designer resides on the desktop and operates as a stand-alone executable. For document preview, the user can launch IMT viewer and load the current IMT with a single button click.

The phases of progress

As part of the first phase, electronic forms are being converted to IMTs and will closely resemble the FormFlow version. Subsequent phases will produce more intelligent IMTs, to include adhoc routing, digital signatures and interactive interfaces with functional legacy systems.

"Our Air Force customers really like the ad hoc routing," which enables users to e-mail IMTs back and forth, Watkins-Taylor said, adding that users will also be able to "sign everything on the IMT in one place," once the Air Force digital signature capability has been established.

"The problem before was that users would save a [partially completed form] and then not be able to find it," she said. "Now it looks like a Microsoft Word document; they name and save it."

Partnerships with several Air Force functional communities are under way to integrate the XML-based IMTs directly into their legacy systems for a Web-based solution for information gathering and transfer. Or, reengineering of a current process that capitalizes on state-of-the-art technology, is being accomplished. The reengineered OES/EES process using PureEdge and the IBM Content Management System technologies, to be implemented later this year, will clearly show the power of the software and the value-added contribution it can make in all functional areas.

Public key infrastructure: security for AF e-business

By Dave K. Johnson
Air Combat Command
Langley AFB, Va.

The need for secure communications and transactions has been with the Air Force since its inception. Security tools and procedures were relatively static until the past couple of decades. Trust was established with non-technological tools in the paper-based environment. Appropriate identification cards led to trust of identity, and secure physical storage devices such as safes and vaults were used to ensure confidentiality. Registered mail and couriers transported information that had to be kept secure. The medium has changed with the digital revolution, but the requirement for a high level of fidelity remains. In general, missions have not changed, but the business processes for accomplishing agency tasks are being forced to adapt.

Several legislative acts and policy documents pushed the Air Force toward the digital environment. Guidance outlined in the Paperwork Reduction Act of 1995; Information Technology Management Reform Act of 1996; Government Paperwork Elimination Act of 1998; and Executive Order 13011, Federal Information Technology, emphasize a shift in the way agencies conduct their missions away from paper and toward electronic business. Another factor driving change is the Air Force personnel reduction. Though we have fewer personnel, they are often expected to continue the level of service prior to the manpower cuts. One strategy to maintain the level of service is through the increased use of information technology applications.

As people become more comfortable using the Internet for services from the private sector, they will expect the same convenience from their government. One major blockade to electronic government/business is the lack of trust and security over a computer network. Requirements to confidently conduct secure electronic business are confidentiality, authentication, integrity, and non-repudiation. Confidentiality is the assurance that only those who are supposed to have access to something will have access. Authentication is confidence in the identity of another party. Integrity is the assurance that information has not and cannot be manipulated. Non-repudiation is trust that an action taken cannot be denied. To overcome the lack of trust, we need processes and technology that give people the required confidence in these areas to conduct business over a network. One of the fundamental technologies that help provide that confidence is cryptography.

Cryptography is the art of writing or deciphering messages in code, and then recovering it to an intelligible form. Conventional cryptography is based on a shared secret. The same key that encrypted a message also decrypts it. The key must be shared ahead of time or sent to the recipient in a way that keeps it confidential. The concept of public key encryption has been around since 1976 and uses a different type of cryptography. With public key cryptography two separate keys are required. One key is kept private while the other key is available to the public. When the public key is used to encrypt a message, only the private key can decrypt it. Since the public key cannot decrypt and only the recipient has the private key, no one but the intended recipient is able to interpret the message. The use of public keys overcomes the concern of sharing or transferring keys. Cryptography establishes a baseline of security; however, to have confidence in Internet transactions, we also need assurance in the identity of the parties we are doing business with. Digital certification is a way of providing that authenticity.

Digital certificates establish proof of identity and enable several network-based activities. The digital certificate might be compared to a digital passport or identification card necessary to conduct secure network actions. Certificates help provide document integrity and protect intellectual property with electronic date stamps. They bind a particular public key to an individual or party, identify the party, and provide information about the certificate issuing entity. A trusted third party is used to verify the legitimacy of the certificate, known as the certificate authority, or CA. With certificates and a CA, two parties conducting business establish implied trust, as both of them trust the CA.

The combination of public/private keys and certificates allows a sender to digitally sign e-mail and documents. For electronic business to really ex-

AF information manager becomes Harvard grad

SCOTT AFB, Ill. -- According to demographics recently released by the directorate of personnel operations, Air Force Personnel Center, at Randolph AFB, Texas, a noticeable gap still exists between the percentage of Air Force officer and enlisted members who have earned college degrees–100 percent, vs. 4.2 percent.

One Air Force NCO, an information manager and NCO in charge of workgroup management, 375th Logistics Readiness Squadron, at Scott AFB, Ill., has done his part to ensure that gap closes ... in June, Staff Sgt. Jeffrey Peterlin graduated, with honors, from Harvard University, in Cambridge, Mass.

When asked what motivated him, not only to complete his undergraduate education, but to do it at Harvard, Peterlin explained, "From September 1999 to October 2002, I was stationed at Hanscom AFB, Mass., assigned to the Air Force Research Laboratory's Electromagnetic Scattering Branch. For the first time in my Air Force career, I worked–almost exclusively–with government civilian and contract personnel. Because of the advanced research and analysis conducted at the lab, an overwhelming majority held doctorate degrees in engineering or physics. The military members that I did deal with were almost exclusively officers, and a majority of them were graduates of the Air Force Academy, M.I.T., or Caltech–I looked around and realized that I was the only one without a diploma on the wall. Their dedication to higher learning sparked my own determination to learn and earn a degree. Fortunately, I was stationed within 12 miles of some of the top institutions of higher learning in the United States, UMass, Boston College, Boston University, and M.I.T, not to mention Harvard University."

As one might assume, the expectations placed on Harvard students are great. According to Peterlin, the demands are constant and unyielding, but once one gets over the initial shock and mystification of the institution, they begin to meet and exceed the professor's expectations–but not without certain sacrifices.

"I attended classes–days, evenings and weekends–and worked at Hanscom, both full-time," he said. "When you take into account the added hours needed for research, assignments and just plain reading, something had to give–I don't think I slept more than four or five hours a night for three years."

Staff Sgt. Jeffrey Peterlin, 375th Logistics Readiness Squadron, Scott AFB, Ill., receives his diploma from Michael Shinagel, dean of Continuing Education and University Extension School, Harvard University.

When asked to recall any difficulties during his time at Harvard, Peterlin relayed the following: "For me, the hardest part was after Sept. 11. Constant vigilance became a necessity of life. Aside from the high level of force protection at Hanscom, tensions and paranoia were high-pitched in Boston, Cambridge, and on Harvard's campus. Everyone mourned–each in their own way– however, student activists took advantage of the tragedy. Every day I would see a different student or religious organization in protest, each condemning the U.S. government, its policies and the military; however, I continued on to class, realizing that what I was–and what I was a part of–enabled these students to express their divergent views and beliefs."

Quality time, spent away from family and friends, was equally difficult.

"My wife gave birth to our child at the end of my junior year," Peterlin said. "I had thought about taking that semester off; however, my wife encouraged me to continue with my studies. We realized that I would be missing out on a lot of my daughter's first year, but we also recognized that if I continued on at my current pace, I had only one year left before I graduated. I knew that, ultimately, my degree was not only for my future, it was for my wife and daughter's as well. My wife

PKI

pand, legislation had to tie legal force to digital signatures. The U.S. government recently passed a bill to put this concept into law. The Electronic Signatures in Global and National Commerce (E-Sign) Act is a major step that will spur the growth of e-commerce. The digital signature provides proof of authentication much like a traditional signature. By employing the technologies/tools described above, we have the ability to set up an infrastructure that will meet the central requirements to confidently conduct secure business. This infrastructure is known as public key infrastructure, or PKI.

The question is not whether we will fully employ PKI in the Air Force, but how soon and how effectively we can transition. Concerns over confidentiality, authentication, integrity and non-repudiation existed well before the digital environment. There is not, nor will there be a guarantee that PKI is wholly secure. On the other hand, conventional methods were never 100 percent secure either. While we may want guaranteed security from PKI, it's unrealistic to expect it. The definitive goal for the military includes the use of PKI with our operational processes. This will certainly include classified data, and our leaders are confident we will have the technology and procedures to handle those processes within a PKI. The Air Force has seen great gains in efficiency over the past 10 years by exploiting technology. Some of the processes we have enhanced entail sensitive and classified information. PKI can be viewed as just another step to a more efficient and effective Air Force. When organizations are able to accomplish electronic business in a PKI environment with equal or better security compared to that of conventional methods, there's no reason it should not become the standard for business.

HARVARD

earned her degree in 1996, and we want the 'pursuit of education,' especially the pursuit of 'higher learning,' to be just as important to our daughter as it is to us. Most importantly, we want to be role models."

Although Peterlin's degree is one in humanities–cultural studies–he explained that its requirements enabled him to choose several courses outside of his major, ones that helped with his Air Force duties.

"One of the courses I took was in classic and quantum physics," he said. "This course provided me with gained knowledge and enabled me to better relate with my coworkers, by possessing a slightly better understanding of the technical information that was being discussed and passed through me."

However, Peterlin did admit that he enjoyed his more liberal courses, as opposed to the technical ones. His favorites were psychoanalysis; biomedical ethics; current topics in medicine; two intensive semesters of Japanese language instruction; African and African-American cinema; literature of the Harlem Renaissance; French, Italian, Russian; and Swedish cinema; social documentary and fine art photography; and a course dedicated to 14th century Florentine Giovanni Boccaccio's *Decameron*, a collection of one hundred stories written during the time of Europe's Black Death epidemic.

It was his more technical courses, however, that not only aided Peterlin in his duties as a research administrator for his section but proved invaluable to the success of a joint Hanscom AFB, Rome Research Site research effort, the team members were eventually recognized and selected as the 2001 Air Force Research Laboratory's Sensors Directorate Team of the Year.

Peterlin explained, "I truly believe that my determination and quest for knowledge–created, motivated, and continually infused by those around me at the lab–enabled me to provide research administrative assistance that I otherwise would have had difficulty accomplishing, let alone understanding." Along with one particular researcher's guidance, Peterlin was ultimately responsible for compiling, typing, maintaining and finalizing the team's research status report, consisting of more than 510 pages of typed text, 140 target aspects and 1,200 data plots.

When asked about his plans, Peterlin, said, "I just turned 35, and since I am too old to receive a regular commission, I am applying to St. Louis University's School of Law, an evening program, and according to statistics, that would elevate me to another enlisted category, the .5 percent of all enlisted members with an advanced degree."

Postal transforms mission

**By Bob Eichholz,
Chief Master Sgt. Jeffery Lane**
and **Bob McCall**
*Air Force Postal Operations and Policy
Washington*

Like many other Air Force career fields, postal is aggressively working to transform its mission and support worldwide. The Force and Information Management Division (AF/ILCX), under the director of Communications Operations, is taking a hard look at every non-main operating base postal activity to see if the primary mission supported is Air Force, if another military service is the predominant force, or if another federal agency would be best suited to accomplish the mission. Basically, the Air Force is trying to reduce or eliminate as many non-Air Force support missions to better use personnel supporting wartime and contingency commitments.

Using the chief of staff's transformation focus as a guide, five postal operating activities were realigned to other services or federal agencies, and 10 personnel were reassigned to main operating base locations where postal shortages existed. The opportunity exists to realign 44 additional authorizations at 16 sites in countries such as Austra-

lia, Belgium, Egypt, Greece, Honduras and Thailand.

Transformation efforts do not stop at the field level. Air Force major commands are responsible for providing approximately 90 percent of the policy and daily oversight to Department of State locations (more than 40 in all). Our goal is for DOD to eliminate this requirement or distribute it equitably among the services. Again, this will allow us to better use our resources in support of the Air Force mission.

As well as working manpower and operational realignments, AF/ILCX, in concert with the Air Force Manpower Innovation Agency, is developing the "first-ever" postal manpower standard. Historically, postal activities require numerous overtime, volunteer hours, and temporary hires to process more than 100 million pounds of mail annually. This effort was started in July 2000 and will accurately identify manpower requirements at Air Force air post offices, aerial mail terminals, and mail control activities worldwide.

As we move toward global transformation of our postal capabilities, we are confident these initiatives will greatly enhance operational efficiency and better support the warfighter.

Photo by Staff Sgt. Karen J. Tomasik

SOUTHWEST ASIA – Staff Sgt. Michelle Mister processes mail for a customer. Mister is the post office's NCO in charge and is assigned to the 386th Expeditionary Comm Squadron at a forward-deployed location. She, her coworkers and volunteers process nearly 33,000 pounds of mail weekly.

Postal then and now

By Master Sgt. Diana Keats
Det. 2, Pacific Air Forces
Air Postal Squadron
Yokota AB, Japan

The year was 1987, the place, Blytheville AFB, Ark. I can see myself now, pecking away at an airman performance report on my typewriter, slick-sleeved, in my olive green fatigue uniform, with cut off sleeves and wearing my low quarters. I was an airman basic at my first duty station, which was part of Strategic Air Command. My Air Force specialty code was 70230, administrative specialist. How nostalgic those memories are for me. Today I wear the battle dress uniform. SAC no longer exists, nor does Blytheville AFB for that matter. The old commands have been restructured and streamlined, and dozens of bases have been closed. Our AFSCs have changed – and we don't have APRs anymore, we have enlisted evaluation reports. Those are just a few of the changes that would take place in the Air Force during the next 15 years. As the Air Force was growing, restructuring, and streamlining itself, not only would the administrative world change but also the postal world specifically would see major structural and operational changes and would prove its tenacity, flexibility and endurance through it all.

After serving two years at Blytheville, I volunteered for postal special duty trying to get overseas. Within three months, I had an assignment to Yokota AB, Japan, as a postal specialist. In 1989, I was assigned to the 6475th Postal Administrative Squadron, or PADMS. When I arrived as an airman 1st class, I was part of a squadron made up of postal and administrators on base. I later learned that PADMS was a one-year test the Air Force conducted to see how a squadron would work made up of administrators and postal personnel. After the year passed, the powers that be decided to scrap the idea and returned to the previous structure. Postal was realigned back into a squadron of its own, and fell under the director of administration. PACAF Postal, 6005th Air Postal Squadron, or AIRPS, was made up of several detachments and operating locations throughout the Pacific. We had detachments in Japan, Korea, Philippines and Australia, with operating locations in Okinawa,

Photo by Master Sgt. Val Gempis

Tech. Sgt. Marivic Patton (left), and Staff Sgt. Marc Nickleberry, postal clerks from the 374th Communications Squadron, Yokota AB, Japan, distribute mail at the post office.

Bangkok, Jakarta, Guam and Alaska. Each detachment had a commander with a small support staff. Along with the base post offices, or APOs, each detachment had an aerial mail terminal, or AMT, and a mail control activity, or MCA. It was the APOs' job to provide mail services to the base populace and the AMT and MCA's job to work with the host nations airline representatives and customs officials, basically to oversee the transportation and delivery of the mail to and from its area of responsibility. Back then, postal was definitely "unified." Every person in PACAF who had the postal special identifier 99604 (now 8M000), belonged to the 6005th AIRPS. But as we would soon see, this changed just as our uniforms had. Major changes would take place that none of us were quite prepared for.

In 1994, the post offices were realigned to each wing's mission support squadron, separating postal personnel for the first time in Air Force history. Although some were collocated on a base with the APOs, the postal personnel at the AMTs and MCAs remained detachments under the 6005th AIRPS, due to their unique mission requirements to move mail for all the services. The APOs now belonged to the base as part of the "one wing, one base, one boss" concept. For two years, the post offices belonged to the mission support squadron, until 1996

when they found themselves under the communications and information umbrella. This change was part of the consolidation of the communications and information management communities. The APOs now belonged to the communications squadrons of each wing. The 6005th AIRPS was redesignated the PACAF Air Postal Squadron which became a FOA under PACAF's Communications and Information Directorate. Now, instead of an officer or commander assigned to each detachment, SNCOs and civilians are at the helm. Today, there is only one officer in charge of postal operations throughout the Pacific, the commander, PACAF AIRPS, Hickam AFB, Hawaii. In the midst of all the structural changes our postal warriors have endured, they've also embraced the quickly evolving world of automation.

Photo by Master Sgt. Val Gempis

Postal clerks from the 374th Communications Squadron, Yokota AB, Japan, unload mail from a delivery truck at the post office.

Gone are the days a clerk would place a parcel on a manual scale and have to look up the price on a chart. Today, calculating the scale price takes a few entries on a keyboard. Rarely do we need to manually input a number; we have "wands" which simply scan onto a form for us. The way we pay the airlines for moving our military mail has also been automated. We used to manually complete a form (AV-7), and then manually calculate the piece and weight counts for each type of mail and type in the information, which led to many accountability errors, affecting airline payments. We now have the military international dispatch and accountability system: a big monster of a machine that calculates and processes the documents for us error-free, and the airlines now get paid appropriately. Automation has been great for postal, literally changing the way we process and deliver mail today, and has also helped change the way we screen and handle hazardous mail.

Today's postal warriors must be highly trained, not only in mail processing, but also in identifying mail bombs and packages laced with anthrax or dangerous chemicals. Mail transiting the military postal service today is deliberately scrutinized. After two U.S. Postal Service employees lost their lives through anthrax exposure in 2001, the military postal service community has taken notice and taken action in an effort to protect its troops. It's not surprising to see postal warriors wearing protective facemasks and gloves. In addition, each postal operation is now equipped with an explosives detection machine, an IONSCAN. While postal warriors have always visually screened the mail for explosives, the IONSCAN enhances our force protection capabilities.

The year is now 2003, the place, Yokota AB, Japan. I am now a master sergeant. After postal assignments in Singapore and Okinawa, I have somehow managed to find my way back to the very base where my postal experience began. As I look around and see the changes and the improvements, I can't help but feel extremely lucky and proud to be a part of such an incredible team. Through it all, PACAF postal has maintained its tenacity of providing its customers outstanding service, maintained its flexibility in the face of change, and has proved its endurance over the years. The Air Force postal team is stronger than it has ever been. That is due in a large part to its people; volunteers run Air Force postal from dozens of other career fields. In other words, Air Force Postal is an "all volunteer force." All volunteer, all extremely motivated, and all highly skilled and trained. To be a postal warrior in the Air Force is to be a proud member of a family that shares a deep-seated commitment to provide exceptional mail services to its members and their families, no matter what change or challenge we may face.

# A brief history of AF comm: info flow determines success

When the Air Force became an independent service in 1947, its initial communications systems were little changed from those employed during World War II. Most of the equipment in use was old Army Signal Corps single-channel voice, telegraph, and torn tape relay, operated over low and high frequency radio and wire carriers.

In the early 1950s, the changing global political climate and continued scientific developments combined to impact the Air Force greatly. Jet aircraft rapidly replaced piston-driven aircraft, and bombers became a global threat. At the same time, ballistic missiles tipped with nuclear warheads became an intercontinental weapon. Air defense systems needed earlier detection, faster analysis, and more rapid and accurate communications to defend North America from possible Soviet nuclear attacks. No longer a local affair, air defense now covered the entire globe and was dependent upon reliable long-distance communications.

Each progressive extension of air defense capabilities was accompanied by increasingly demanding requirements for communications. These requirements were changing so rapidly and drastically that the basic systems and techniques which had once proven satisfactory were soon outdated. Weapons, radar and communications could no longer be operated as separate systems joined by human operating links. The need to reduce the time lapse by the greatest amount possible, while attaining the highest reliability and accuracy, called for meeting stringent new requirements.

Such new capabilities became possible with the advent of the electronic computer and the development of associated data processing, conversion and transmission equipment. The electron tube, the transistor, and a common-language system of digital data gradually reduced the human functions to maintenance and decision-making.

These developments continued into the 1960s with the increasing use of computers and the introduction of miniaturized electronic components using integrated and high-speed data circuits. The former permitted large scale data recording and analysis; the latter opened new avenues in the communications field. In many ways, the development
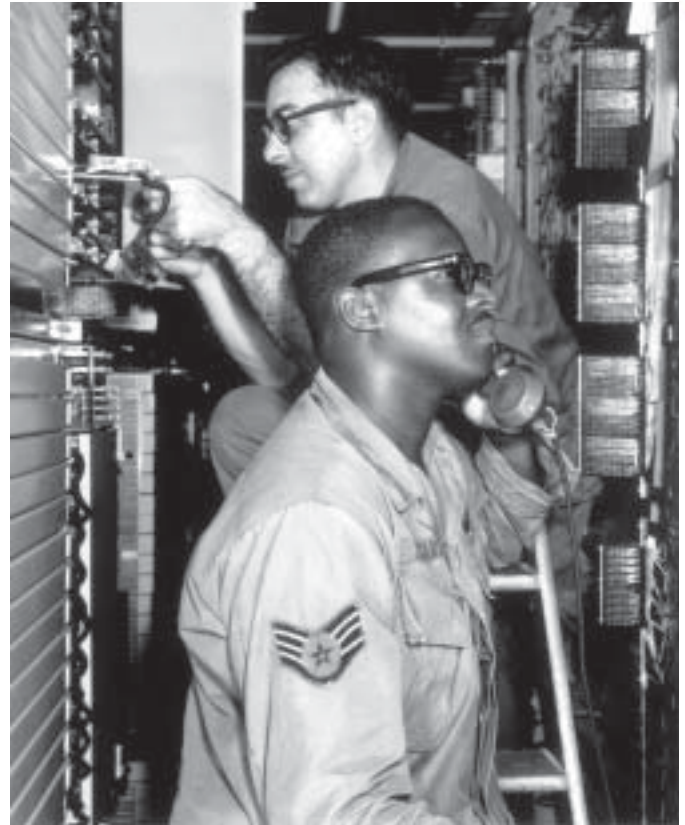
Air Force Communications Service provided direct dialing systems throughout Vietnam and Thailand in the 1960s.

of high-speed, inter-base record communications systems provided the most dramatic accomplishment in Air Force communications during the early '60s.

One of the most significant technological innovations to enter the Air Force's communications inventory in the 1960s was the communications satellite. After a series of experimental satellites paved the way, the military use of satellites became a reality in the late '60s. Under the initial defense communications satellite program, the first communications satellite terminal was placed in operation at Clark AB, Philippines, on July 1, 1967.

The war in Vietnam dramatically tested the responsiveness of communications operators to the various demands of tactical combat as well as counter-insurgency operations. Air Force commu-

Birds of war used for command and control

By Dave Bounds Jr.
*Air Force Command and Control
& Intelligence, Surveillance,
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History Office
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A view from a pigeon camera.

"A curious wedding of an ancient method of communication with the most modern technology." While that remark was made about the use of pigeons to communicate during World War II, it might easily be applied to some aspect of command and control today. As such, carrier pigeons are one unique historical example which serves to remind just how far C2 has come.

When, as the U. S. entered World War I, Gen. John J. "Blackjack" Pershing called for 2,000 pigeons, "pigeoneering" was neither new nor particular to one country. For centuries the birds had been used, carried to distant places in order to have messages or other items attached to their legs and so transmit information by returning to their loft. The Germans even invented a lightweight timer-controlled camera that could be strapped to the bird's chest. Although it was an innovation that only fluttered into brief existence before the Great War, the "pigeon camera" is prima facie evidence of how valuable the birds once were as a C2 "node."

More than 90 percent of the pigeons used in that war completed their missions, and sometimes at great cost, as with the famous pigeon that helped save what was left of the so-called Lost Battalion. Pinned by Germans in the Argonne Forest, the battalion loosed its last pigeon with a message for help. Giving new meaning to the concept of *survivable* communications, the bird broke through German gunfire and flew 25 miles in 25 minutes to deliver the message–even after having lost an eye, had its breast-bone broken and one leg practically cut away.

During the interwar years, pigeons were not only sustained as viable communicators, they gave the airplane a run for its money–*literally*, in one instance. In 1922, the San Francisco press roped "Hap" Arnold into their argument that the pigeon could carry a message faster than the airplane. The founding father of the Air Force soon found himself flying against some combat-veteran pigeons in a well-publicized race from Portland to San Francisco. Although the birds lost, the race made for a fascinating watermark in C2 history: Though recorded as a "silly" publicity stunt to win attention for aviation, it was also a real contest of communicator versus communicator.

The pigeons' speed was actually legendary, many of the birds able to fly a mile a minute for extraordinary distances. That produced timely transmissions, as when a "pigeongram" prevented certain friendly fire by an Allied air raid on a previously German-occupied town. By one account, pigeons were able to clip six hours off surface communications. Where wounds eclipsed the birds' timeliness, it did not always spell failure: One pigeon, struck by a bullet which drove the message cylinder into its chest, went down in broad daylight and was presumed dead–then arrived at its loft the next day. The bird died as soon as the message was removed from its chest.

Whether strapped to the body of a spy for days or returning to find their loft even after it had been moved 50 miles, the birds were as reliable as they were swift. Such characteristics, coupled with the "reliable unreliability" of communications in that era, accorded *thousands* of pigeons a place in World War II.

The birds carried messages, maps, even undeveloped film. For contact with the Resistance, British liaisons parachuted pigeons into France, a successful system used also to relay information about American aircraft downed over the continent. War correspondents obtained their use, hence the news of some events, like the Allied advance into Gafsa in 1943, was broken to the world by a pigeon. There even existed, in the manner of signals intelligence or SIGINT, what might be called "PIJINT" or *pigeon intelligence*. Allied pigeoneers would release their pigeons to flock around a pigeon seen leaving Allied areas (i.e., headed toward the Germans),

A pigeon is held out of a tank turret prior to release.

PIGEONS
From previous page

then signal them back and so lead the "rogue" down. In this manner some reports on Allied movement were intercepted and replaced with false ones.

All of this was understandably humorous to some, as when the signals section responsible for Operation Overlord's complex communications could "hardly keep a straight face" when they talked to a "pigeon officer," who met with them for some last-minute planning. It was an atmosphere not uncommon during those technologically groundbreaking times which had revived an old World War I joke that pigeons were being crossbred with parrots so the birds could *speak* their messages. Pigeoneering nevertheless proved useful in situations that were no laughing matter.

From the drop zone-marking teams preceding the invasion, to the troops dropping into the thick of it, pigeons accompanied radios and radar beacon sets amidst a massive network produced with help from AT&T and MIT. One paraglider who broke his back in the drop was left with two pigeons, each bearing a message about his unit's status, the appropriate one to be released at daylight. Such an "ancient method" probably seemed neither extraneous nor absurd when most of the radios used in the invasion were either damaged, lost or destroyed.

Although pigeons were retained into the late 1950s, World War II virtually signalled the end of their military use, a "legacy system" overwhelmed at last by modern technology. Pigeoneering had more than endured, however, in the very decades that brought radio and radar, transistor and computer, airplane and satellite.

It had sometimes prevailed.

A past of pride

April 26, 1943: The Army Airways Communications System was activated as a wing and assigned to the Army Air Forces' Flight Control Command. The history of AACS as an organization rather than a system under Headquarters AAF, began with this action. The first commander was Col. Lloyd H. Watnee.

April 1, 1970: The Ground Electronics Engineering and Installation Agency, or GEEIA, was consolidated within Air Force Communications Service. AFCS would not only furnish, manage, operate and maintain communications-electronics meteorological and air traffic control equipment, but would also engineer and install equipment and facilities.

April 23 - May 1, 1975: During the evacuation of Saigon, four AFCS men, Tech. Sgts. Antoine Kristol and Benjamin Scott, and Staff Sgts. George Pappas and Stephen Blyler, with a radio-equipped jeep, provided comm for the U.S. Defense Attache Office. By April 28, attacks on Saigon had become so heavy that the team was ordered to evacuate. Kristol and Blyler volunteered to stay to support the Marine guards. When Kristol and Blyler were airlifted out May 1, they were the last Air Force personnel evacuated from South Vietnam.

April 1, 1989: At Headquarters Air Force Communications Command, the directorate of Administration was renamed directorate of Information Management. This was an Air Force-wide change prompted by its growing role in IM.

The global communications system, basically a radio system, was the first integrated comm system to span the world. Construction began in 1951. Pictured here is one of the system's torn-tape relay centers.

Prince Sultan Air Base enters new age for secure telephone switching

By Senior Master Sgt. Walter C. Schoffer Jr.
363rd Expeditionary Communications Squadron
Prince Sultan Air Base,
Kingdom of Saudi Arabia

Prince Sultan Air Base, or PSAB, probably didn't notice anything different in the way the sun rose Jan. 23, but that day marked the dawning of a new age for secure telephone switching and the end of an era for the AN/TTC-39A, a mobile tactical central telephone office, affectionately called TICK-39 or just TICK.

The 363rd Expeditionary Communications Squadron brought the Air Force's newest tactical secure voice capability online on that day, as the final circuits were moved off of the TICK-39, and connected to the new switch multiplexer unit, or SMU. Although there were other SMUs in the Southwest Asia theater, this was the Air Force's **first** to be configured to serve as a fully integrated compact digital switch, or CDS, capable of replacing the mission of the venerable AN/TTC-39A.

The importance of the event and its impact are best summed up by the words of Lt. Col. Gary D. McAlum, 363rd ECS commander: "The SMU is a major milestone in the evolution of secure communications. It boasts significant improvements over the AN/TTC-39. It is easier to maintain, more reliable, and improves quality of service. It also relieves the Air Force from a serious manning burden, with SMU operations and maintenance being 100 percent contractor-supported."

The AN/TTC-39A is part of a large, but aging,

Master Sgt. Valerie Goehring helps connect a 900-pair cable to the SMU.

family of mobile communications equipment designed to rapidly bring a robust communications capability to a bare base. This family of interoperable equipment is commonly known as tri-service tactical communications, or TRI-TAC, equipment, conceived with the goal of facilitating vital command and control communications between all U.S. forces and North Atlantic Treaty Organization partners. The AN/TTC-39A van served as the deployed base telephone switch and was comparable to your home town telephone company in a tractor-trailer. It was one of the first military tactical telephone switches capable of automated operation (no need for an operator to answer and manually connect calls) and could provide services for both analog and digital voice plus data traffic. Its built-in communications security equipment rack was one of the most important features, giving it **secure** automatic telephone switching capability.

The TICK-39 provided a varying degree of PSAB's telephone switching capability since 1996. In the beginning, it provided all primary telephone switching. A commercial SL-100 telephone switch (just like the one "downtown") was installed at PSAB in 1997, and the AN/TTC-39As were dedicated exclusively to providing secure telephone capability, servicing the tactical KY-68 digital secure voice telephones. For those unfamiliar, the KY-68 is a big, ugly green telephone, loved by all despite its appearance because of the instanta-

Exterior view of an AN/TTC-39A without mobilizers.

neous secure voice capability it provides. A little more than a year ago, a concept was proposed to replace the TICKs completely with the newest switching technology, the SMU. The SMU project moved amazingly fast at PSAB. The structure and major pieces of the SMU were in-place by September, and everything was ready to start transferring circuits by Dec. 27.

The PSAB SMU is capable of roughly the same number and types of circuits as the TICK. However, it does have major technological advances. It is much easier to program switching schemes, and it provides far greater feedback to the technician through its computer interface. The PSAB TICK maintainers describe the ease of setup and operation of the SMU as simply amazing. They won't be the experts maintaining it though – contractors will. Part of the whole SMU/CDS concept is to cut back on the number of "blue-suit" secure-voice maintainers in-theater.

In recent years the aging active duty TRI-TAC equipment has been undergoing phase-out to the new theater deployable communications suite of equipment. The Air and Space Expeditionary Force Center is increasingly forced to turn to Air National Guard units to fulfill AN/TCC-39A manning requirements at contingency locations around the world, as active duty units integrate into and spin-up on TDC. For example, nine of 10 assigned TICK-39 maintainers at PSAB are Air National Guard personnel during the current rotation. The SMU and its contractor operation actually free up 15 military maintenance authorizations.

It will truly mark the end of an era when the AN/TTC-39A maintainers assigned to the current AEF rotation depart. It will be the last time blue-suit maintainers handle the secure-voice switching needs of this base, and one more step down the road to replacement of TRI-TAC communications equipment at PSAB. For all the tactical communications "old-hats," it's both a sad and an exciting time. It's sad to see an old friend who has served well retire and depart, but exciting to see the next generation take the field.

Staff Sgt. Doug Toews programs a secure telephone circuit into the AN/TTC-39A.

Master Sgt. Andler monitors circuit activity at the operator interface console.

86th Communications Group celebrates 40 years of service

By 2nd Lt. Daniel P. Walters
86th Communications Group
Ramstein AB, Germany

The 86th Communications Group is scheduled to hold a dining-out this month to celebrate its 40th anniversary. From South Vietnam to Germany, 86th CG warfighters have provided communications and information services needed to get the job done right.

Headquartered at Tan Son Nhut AB, South Vietnam, the then 1964th Communications Squadron formed May 1, 1962, to satisfy extensive requirements for fixed rather than mobile communications requirements in Southeast Asia. In October 1962, the Air Force elevated the unit to group status and gave it responsibility for four detachments in Vietnam and two in Thailand. In 1963, when the inefficiency of using contingency gear for an extended mission became obvious to Air Force Communications Service, they transferred most navigational aids and air traffic control facilities from the 1st Mobile Communications Group to the 1964th CG. At its peak in 1968, the 1964th had grown from a squadron staffed with one officer to

Lt. Col. John Carson, then commander of the 1876th Communications Squadron, at Tan Son Nhut AB, South Vietnam.

The first home of the 1964th Communications Group at Tan Son Nhut AB, South Vietnam.

an organization with 10 subordinate squadrons and 3,300 personnel.

"It was the third comm squadron I had commanded and the most rewarding," said Lt. Col. John Carson (ret.), former 1876th CS commander, a subordinate unit of the 1964th. "When I departed I knew I was leaving 1,000 brothers, men that knew I cared for them and made me look great."

Another former member, then Airman 1st Class Bob Taylor, recalls his time in the unit in 1965. "I took an assignment to go to Monkey Mountain, about eight miles from Tan Son Nhut AB. We lived in a compound at the bottom of the mountain and worked at the comm radar site at the top. I worked on the UHF link that sent radar data to DaNang. We traveled up the mountain only during the day, as it was 'hot' at night, forcing the duty hours to be from about 1600 to 0800."

During the withdrawal of U.S. forces from Vietnam in May 1973, the Air Force redesignated the 2135th CS, located at Ramstein AB, Germany, as the 1964th CG to preserve the heritage of this outstanding communications unit. Air Force Commu-

nications Command organized the unit as a type one group reporting directly to HQ European Communications Division. Since then, several significant administrative changes have occurred. AFCC reorganized 178 units in Europe on Oct. 1, 1984, to combine data automation with existing communications organizations. It named the new, combined unit at Ramstein the 1964th Information Systems Group.

On Jan. 1, 1986, AFCC further expanded the group to include the directorate of Combat Information Systems, European Information Systems division. The mission of the 1964th now included the Worldwide Military Command and Control System. Along with this merger came the realignment of the unit under the 2005th Information Systems Wing in July 1986. In November 1986, HQ AFCC once again realigned and changed the unit name back to the 1964th CG.

In conjunction with the Air Force Composite Wing reorganization, the 1964th CG realigned with the 86th Airlift Wing on May 1, 1991, and became the 86th CG. In addition, USAFE aligned Det. 2, formerly the USAFE Special Maintenance Team, under the 86th CG, along with three radio relay sites: Bann-Main, Langerkopf and Muhl-Zuesch.

Continuing its growth, on July 1, 1994, the group added the 86th Communications Squadron and the 786th Communications Squadron, both located at Ramstein. At this time, Det. 2 became Det. 1.

A communications group member serves as a security forces augmentee to assist with base protection.

Airman 1st Class Bob Taylor (left) worked at a radar site on top of Monkey Mountain near Tan Son Nhut AB.

The 86th CG again restructured on July 1, 1995, with the transfer of the WWMCCS, Regional Processing Center, and Det. 1 functions to the USAFE computer systems squadron. Finally, on Aug. 1, 1996, the 617th CS at Sembach AB deactivated and reactivated as the 886th Communications Squadron, now aligned under the 86th CG.

The 86th CG currently provides global communications-computer systems service and equipment to support Ramstein AB, Rhein-Main AB, the Kaiserslautern Military Community, 32 geographically separated units, and missions across the EUCOM and CENTCOM AORs.

The group has earned the Air Force Outstanding Unit Award, with 13 oak leaf clusters and nine Vs for valor; the Republic of Vietnam Campaign Ribbon, with 16 oak leaf clusters; and the Republic of Vietnam Gallantry Cross, with palm. Its distinguished history and proud heritage have consistently echoed the selfless service of the people who have made the unit great.

Spokane's 242nd CBCS celebrates 50 years

SPOKANE INTERNATIONAL AIRPORT, Wash. -- The 242nd Combat Communications Squadron, at Geiger Field Air National Guard Base, Spokane International Airport, Wash., celebrates its golden anniversary this year and continues to provide combat communications to the warfighter at locations around the globe.

The 130-person Air National Guard communications squadron is responsible for providing satellite, microwave, telephone and network communications in a combat environment. They normally deploy with a flying wing such as the 92nd Air Refueling Wing to provide the everyday communications services we take for granted stateside.

Members of the 242nd Combat Communications Squadron, after receiving the National Defense Service Medal and Southwest Asia Service Medal.

"When you deploy to a remote location overseas, access to secure radios, phones, e-mail and the Internet is an absolute necessity," said Maj. Mark Sweitzer, 242nd flight commander. "The 242nd's job is to establish this 'communications flow' and continuously sustain the transfer of data measured in 'gigabytes per second' that directly supports wartime operations."

The 242nd was slated for an operational readiness inspection this summer after a successful dress rehearsal at Fairchild AFB, Wash., last year. However, last February the unit was activated under presidential mobilization orders and deployed more than 33 airmen overseas on a demanding 180-day mission to join the war against terrorism.

The list of Spokane area guardsmen deployed overseas is an interesting group of salesmen, students, college professors, phone company technicians, bankers and a CPA.

"I'm extremely proud of the way the Air National Guard stood up to a demanding 180-day mission overseas when called upon to fight the war on terrorism … The 242nd is conducting a wartime operation which requires the highest level of commitment," said Lt. Col. Jim Hutchinson, 242nd CBCS commander.

During peacetime, guardsmen normally go on active duty orders to complete initial training and then drill one weekend a month and two weeks each summer. The 180-day deployment by the 242nd underscores the ANG's significant contribution to support the nation's war effort.

Due to its proximity to Fairchild, the 242nd is part of the 141st ARW family and a member of Team Fairchild. Last summer, the ramp space at Geiger Field hosted 92nd and 141st Air Refueling Wing flight operations during Fairchild's runway closure. The 242nd maintained aircraft ramp access, installed remote telephone lines, and provided a break area for security forces on 24-hour patrols. They also off-loaded more than 600 gallons of fuel to keep aerospace ground equipment and support vehicles on the move.

The 242nd CBCS is also tasked to provide specialized communications assistance during natural disasters and civil disturbances under direction of the governor of the State of Washington and the adjutant general.

For more information, visit their Web page http://www.wafair.ang.af.mil/MainPage/242CBCS/242.htm

nications played a critical role in Southeast Asia, providing a wide range of communications services, including point-to-point within Southeast Asia, real-time communications to and from the national command authorities, and air traffic services throughout the region.

With Air Force communications operations circling the globe, and political and technological forces calling for continued alterations and modernizations of cable, microwave and tropospheric transmission systems, Air Force communicators throughout the 1970s worked on hundreds of communications projects. Among the more significant efforts were microwave modernization programs, transmitter and receiver modernization efforts, satellite communications development, high frequency modernization programs, and updating on-base communications, weather communications, and all aspects of air traffic services.

The full impact of technology is often felt only when separate but complementary threads of invention are drawn together to create new and powerful capabilities. In the 1980s this was exemplified by the merging technologies in communications and data automation. The lines of demarcation between computers that communicated, communications devices with an innate computing function, and office automation equipment became blurred. The term coined to describe this merged technology was "information systems." As this merged technology was increasingly adopted, the '80s marked the period when the "user" became the "communicator." No longer did the user need to go to the data or communications center; such

A 2045th Comm Group member, Andrews AFB, Md., works at an AUTODIN network systems console. This completely automatic system could handle any type of digital input teletype, data cards, or computer-to-computer information.

capabilities were now sitting on everyone's desk.

The promise of this new technology reached its first widespread use within the Air Force in the 1990s with the adoption of such tools as local area networks, wide area networks, and the Internet to provide almost instantaneous communications anywhere in the world.

Communicators, in their early history, were not always understood for the critical role they played. While leaders such as Gen. Curtis E. LeMay recognized the importance of communications, most warfighters were not well informed as to the impact that communications had on the success of the mission. By the end of the 20th century, however, as communications expanded to include the whole gamut of information services, there was an increasing appreciation of the crucial role that information services played in modern warfare.

Two conflicts near the end of the century, the Persian Gulf War and the conflict in Kosovo, clearly demonstrated the central role that information played in air warfare. Everyone now clearly appreciated what communicators provided. IT affected not only the leadership, but also how the war was fought. The centrality of the role communications plays is perhaps best summed up by a non-communicator involved in Kosovo who bluntly stated, "Information flow during an operation is what determines success."

In Desert Fox and Allied Force, the Air Force turned to the Web as the next step up the technology ladder. It proved that it does not matter where you are located, it matters that you are on the net, Web-enabled, and engaged.

A NCO relays flight information to a departing C-130 aircraft while another listens, during the 4th Combat Comm Squadron's participation in Exercise Healthy Star '88.

Electrons get B-52s to battle

By Tech. Sgt. Jason Tudor
457th Air Expeditionary Group
Public Affairs
Operation Iraqi Freedom

It is not just jet fuel that launches B-52 Stratofortresses to the fight. It is electrons forming air-tasking orders streaming through a secure, secret military network that propels the bombers into flight.

"No comm, no bomb!" and "If you can't talk, you can't fight a war," boast the troops of the newly named 100th Air Expeditionary Group Communications Flight at a forward-deployed location. With that motto fixed in their minds, the team of deployed airmen and civilians ensures bombers get to war and necessary communications traffic flows unhindered.

Master Sgt. Chris Norrod, superintendent of the flight, has watched his network control center team grow from 15 to 34 people. They have come from around the world to build 24-hour service, creating more than 1,400 user and e-mail accounts while shaping the backbone of a network crucial to winning the war with Iraq.

That means creating a robust, second-to-none secret traffic network to get information to intelligence planners and aircrews. The communications team also built an "alternate duty location" in the community activity center that doubles as a sort of "Internet cafe." There, home-sick airmen can check e-mail or make morale calls back home.

Expanding a network from 250 to 1,500 users does not come without pitfalls, Norrod said.

"When 1,400 people arrive on your door step, they all want immediate access," he said. He added that despite a few minor glitches, everyone seems pleased with the service provided. "We worked as quickly as we could to get everyone network access and e-mail.

"With more than 1,200 computer users and B-

Photo by Staff Sgt. Cherie A. Thurlby

A B-52 Stratofortress receives fuel from a KC-135 Stratotanker over the Indian Ocean. The KC-135 crew is from the 931st Air Refueling Group at McConnell AFB, Kan., and is deployed to the 405th Air Expeditionary Wing to support Operation Iraqi Freedom.

52s to fly, the base network had to be tough and technologically sound," said Norrod.

This base's network processes thousands of gigabytes of data each day. The network also includes a World Wide Web server, e-mail server, Internet address controllers and the omnipresent firewalls for security.

To meet wartime needs, Norrod's team has also added an intricate secret communications system. Through a wired system of PCs and other hardware, senior planners can deliver war orders to the airmen, including flight plans and targets.

Most of the hardware and software was in place before aircraft and airmen arrived, so the base only needed to purchase 17 PCs and a few odds and ends for the influx of troops, Norrod said.

"One thing we never know is exactly what will be needed, so we prepare for every capability," he said.

Staff Sgt. Max Parris, the network manager, said the system was new and untested after an upgrade in April 2002.

ELECTRONS

"Since then," Parris said, "we've had problems but have worked through each one to make this network one of the best in the Air Force."

Parris noted that more than 75,000 e-mails and thousands of terabytes of traffic flow in and out every day.

Norrod said his team has triumphed given the nonstop pace of operations.

"They've approached everything enthusiastically. They want to do this job," according to the 19-year veteran. "I couldn't have asked for a better group of folks to be in the fight with."

Parris' enthusiasm welled up when talking about comm's relationship to the mission.

"Everyone in this office knows he or she contributed to any B-52 launch. That's a great feeling," he said. (*AFPN*)

AFCA Deployment Day

Photo by Tech. Sgt. Michael Leonard

Air Force Communications Agency's 1st Lt. Ryan Rasmussen, Technology Product Integration, checks his deployment folder with Master Sgt. Kevin Daugherty, Enterprise Information Branch, during AFCA Deployment Day, last month at Scott AFB, Ill. With all agency military members being in mobility status, the event provided an opportunity to review mobility folders, assure records were complete and current, and check personal belongings. About 10-20 agency personnel are deployed at any given time, typically including engineers and technicians skilled in missions such as SCOPE Net and Hammer ACE, and individuals supporting regular AEF taskings.

Air Force announces maintenance award winners

WASHINGTON (AFPN) – Air Force officials recently announced the winners of the 2002 Lt. Gen. Leo Marquez Maintenance Awards, along with the 2002 Maintenance Effectiveness Awards.

The winners of the Lt. Gen. Leo Marquez Maintenance Awards for communications-electronics maintenance are:

* Field Grade Manager: Maj. Aaron M. Smith, Hurlburt Field, Fla.

* Company Grade Manager: Capt. Bradley L. Pyburn, Kadena AB, Japan.

* Supervisor Manager: Master Sgt. Bobby E. Simmons, Kadena AB.

* Technician Supervisor: Staff Sgt. Shane R. Bohl, Elmendorf AFB, Alaska.

* Technician: Senior Airman Angel M. Ramos, Hurlburt Field.

* Civilian Manager: Herb M. Reid, Hurlburt Field.

* Civilian Technician: Douglas D. Schinn, Elmendorf AFB.

The maintenance effectiveness awards winners are:

* Communications-Electronics (Large): 3rd Combat Communications Group, Tinker AFB, Okla.

* Communications-Electronics (Medium): 9th Communications Squadron, Beale AFB, Calif.

* Communications-Electronics (Small): 55th Communications Support Squadron, Offutt AFB, Neb.

* Large Depot: Oklahoma City Air Logistics Center, Tinker AFB.

* Small Depot: Cryptologic Systems Group, San Antonio, Texas.

Two Robins units receive deployment orders

Story and photo by Staff Sgt. Adam Stump
5th Combat Communications Group
Public Affairs
Robins AFB, Ga.

The 5th Combat Communications Group and 116th Air Control Wing here received orders to deploy to the U.S. Central Command theater of operations.

The orders are a part of a larger action by the United States to reposition some of its military forces to support the global war on terrorism and to prepare for future contingencies.

"We're fired up," said Col. David Cotton, the 5th CCG commander. "This is what we train for every day."

The airmen and soldiers are ready to go, and the deployment will be historic because it is the first time a total force wing, comprised of both Guard and active duty, Air Force and Army, will deploy, said Lt. Col. John Labuda, the 116th Air Control Wing public affairs officer.

The Army detachment provides trained and deployable Army air crews to the Joint Surveillance Target Attack Radar System. Detachment soldiers also conduct surveillance, target detection and tracking for joint force commanders worldwide.

Staff Sgt. Ian Powell, 54th Combat Comm Squadron, checks a fiber optic repair kit before putting it on a pallet. The 54th is part of the 5th Combat Comm Group, at Robins AFB, Ga., which received orders to deploy to the Central Command theater of operations.

"I'm excited," said Airman 1st Class Hanika Smith, a computer network controller for the 51st Combat Comm Squadron. "I can't wait to get over there. I'm ready to put all of this practice to work."

Official: Watch Web site content

By Gerry J. Gilmore
American Forces Press Service
Washington

The U.S. military uses the Internet as an electronic conduit to quickly disseminate information. From a security perspective, however, stretches of that worldwide information highway contain potholes.

"We need to use the Web for efficiency and effectiveness – it's a great medium. But, we have to use it with security and information sensitivity in mind," said Linda Brown, a Department of Defense information technology specialist and the person responsible for the DOD Web site administration policy.

DOD Internet security is getting better, even as more and more military information is being carried over the World Wide Web, said Brown, who works in the office of the assistant secretary of defense for command, control, communications and intelligence.

On the other hand, operations and exercise plans, plus installation maps for water, electric and other utility services, have no place on publicly accessible Web sites. That kind of information "would be helpful for someone intending to defeat our plans, our intentions," she said.

Classified information, she said, is contained within heavily safeguarded separate networks that can be accessed only by certain individuals. However, there have been cases where the public was found to have access to things that were supposedly only on protected intranets.

Such occurrences, though,

GI Mail links deployed airmen to home

By Cynthia Bauer
Air Mobility Command Public Affairs
Scott AFB, Ill.

With airmen deployed away from home, the opportunity to communicate with loved ones takes on greater importance.

"To provide a link back home, Air Force Crossroads, the Air Force's official community Web site, offers a secure and reliable e-mail program through Global Internet Mail to help families keep in touch," said Capt. Greg Whitaker of the Air Mobility Command Network Operations and Security Center here.

"Although there are other nonprofit and commercial e-mail and Internet services available, military members need to understand GI Mail is sponsored and maintained by the Air Force. We can't verify the operational capability or security of other such services," he said.

Registration for GI Mail is free for those eligible through the Air Force Crossroads Web site at www.afcrossroads.com. Airmen can log in to the Web-based system from any computer with Internet access. Eligible users include active duty, Reserve, Guard, retired and civil service employees and their authorized family members.

Whitaker said there are three great reasons to use GI Mail: security, bandwidth and availability.

"You've probably heard about the various break-ins and hacker attacks at free commercial e-mail providers," he said. "GI Mail is a Department of Defense system, employing the same great security you've grown accustomed to in AMC," he said.

Concerning bandwidth, there is no advertising or "spamming" from junk mail distributors on GI Mail, unlike commercial providers. "Not only will the service remain speedy even in the most remote or forward locations, but users will not spend time sifting through mountains of junk mail," Whitaker said. "And GI Mail is a DOD product provided for morale. Unlike civilian services, the system will get the attention and maintenance that our deployed personnel deserve."

Besides GI Mail, the Air Force Crossroads Web site also offers forums and online chat rooms, and has online videoconferencing tools under development. Access the Web site and click on "Communications Center" for additional information.

According to CeCe Medford, chief of AMC's family matters branch, families who do not have computers or Internet access can rely on family support centers for help.

"Our family support centers have gone the extra mile to ensure families can stay in touch, even without a home computer," she said. "The FSCs have computers with connections to Internet service providers available for families to use."

Medford said that family readiness noncommissioned officers can explain videoconferencing, how to borrow digital and video cameras, how to sign up for morale calls, and special family activities.

> **" ... military members need to understand GI Mail is sponsored and maintained by the Air Force. We can't verify the operational capability or security of other such services."**
>
> *Capt. Greg Whitaker*
> *AMC NOSC*

WEB

are most often inadvertent and quickly remedied when discovered, Brown said.

Other items definitely not for public viewing include anything that is for official use only, detailed computer system information, organizational manning charts and graphics, and photos of base entrances and exits, she said.

Even unclassified, personal information could be of interest – information such as home addresses that would allow Web surfers to harass or target servicemembers' families, Brown said.

DOD's Web policy is accessible at http://www.defenselink.mil/webmasters. The site provides guidelines on what DOD Web administrators and content providers can and cannot do on the department's Internet pages.

DOD officials have been concerned about Web security issues for years – long before the global war on terrorism erupted, Brown said.

"The basic DOD Web policy was issued in 1998," she explained. "Maybe we have some heightened concerns because of the world situation today."

U.S. adversaries routinely check out DOD Web pages for information, Brown said.

"It's an ongoing, constant concern." (*AFPN*)

Use common sense when posting to Internet

By Master Sgt. Scott Elliott
Air Force Print News
Washington

Recent advances in technology have Air Force officials urging airmen to use common sense and remember operations security when posting on the Internet.

An item of special concern is the placement of photos of forward operating bases on personal Web sites. What has officials worried is the possibility of adversaries collecting those photos and using them to plan attacks against U.S. forces.

According to Lt. Col. Brieuc Bloxam, Air Force operations security program manager, airmen have posted photos on their Web sites of personal living areas, common-use areas such as dining facilities and basketball courts, operations buildings, perimeter fences and guard shacks.

"It makes people very nervous when they come across those (on the Internet)," Bloxam said.

Maintaining operations security, Bloxam said, is one of the keys to effective force protection.

"Ultimately what's important is that OPSEC can and does save lives and increases our mission success rate," he said.

While there are no specific regulations or laws that prevent someone from posting unclassified information on a personal Web site, Bloxam said people should keep in mind the Internet's reach.

"At present, there is nothing that says I can't take personal photos with my personal camera and post them," Bloxam said. "But when you post something on the Web, you're posting to the world, and you don't control who has access to the information you're posting. You're open to threat, and you may put others at risk in the same way."

In a recent case, Bloxam said, personal photos taken by an airman and placed on a personal Web site were downloaded and placed on an anti-American site. What began as "I was here" photos for friends and family became propaganda material used by an adversary.

Air Force legal officials say a commander's right to protect his forces may supersede a person's right to post.

Photo by Staff Sgt. Lesley Waters, Coalition Information Bureau

Troops deployed in support of Operation Northern Watch at Incirlik AB, Turkey, send e-mails home to loved ones from the morale tent at Hodja Village.

"I would be surprised if anybody would argue that they had some sort of First Amendment right to publish photos ... especially when we're in a heightened state of security," said Lt. Col. Timothy W. Murphy, chief of the command doctrine and employee law branch in the office of the Air Force judge advocate general.

"National security and the security of personnel are compelling reasons ... to prevent this type of speech," he said.

Murphy said if a commander determines there are legitimate security concerns, he can prohibit personnel from posting to the Internet from his location, even if that means curtailing "morale call" types of e-mail access.

"When you put security concerns together with the fact that you're using government Internet access time, it's reasonable for the U.S. military to say 'no pictures,'" he said.

While commanders may have the ultimate responsibility, Bloxam said, maintaining operations security and force protection is everyone's business.

"Security, ultimately, is everyone's responsibility," he said. "It's everyone's duty to protect themselves and the U.S. armed forces, even if that means you don't send out a photo over the Internet. That 'innocent' picture of you standing outside your dorm may provide an adversary all kinds of information."

'Emergency essential' civilians to get vaccine

Civilian employees deployed to fill emergency-essential positions at selected overseas locations are now required to receive the smallpox vaccine, Pentagon officials said.

According to Col. Rainer Stachowitz, deputy director of the nuclear and counter proliferation directorate at the Pentagon, theater commanders will determine which civilian positions fall into the emergency-essential category.

"There are a lot of people in theater now who are not, or at least a week or two ago were not, coded as emergency essential," Stachowitz said. "If a commander says 'I really need this person here,' they have the authority to make the change."

"In today's military environment, civilian employees are a critical component of our force structure. We absolutely have to have them to accomplish our missions," Stachowitz said.

"If we want them to support us, we need to provide them the same level of protection we're providing to our military folks. Therefore, they're included in the vaccination program," he said.

Although a commander may determine if a civilian position is emergency essential, it is up to the individual employee whether or not to accept the role – and the accompanying vaccinations.

Photo by Airman 1st Class Jason Neal

Airman 1st Class Rebecca Burgess inoculates an airman at Pope AFB, N.C., against smallpox. Burgess is a medical technician with the 43rd Medical Squadron. Now civilian employees deployed to fill emergency-essential positions at selected overseas locations are required to receive the vaccine.

"If they accept it, they have to take the smallpox vaccination. If they decide they don't want to do it, they have to be moved out at the first opportunity." In the future, civilian employees deploying to fill emergency-essential positions will be vaccinated before departure.

Contractors providing mission-essential services at certain overseas locations are also required to receive the smallpox vaccine. Local civilian personnel offices have more information.

Civilians urged to register contact data

Air Force civilian employees can benefit from the same next-of-kin notification process provided to the families of injured or killed uniformed airmen by providing their emergency contact information on a secure electronic file.

"This is a great service to our total force that has never existed before," said Dr. James G. Roche, Secretary of the Air Force. "This is the right thing to do. I hope our Air Force civilians, commanders and supervisors will do their best to ensure everyone knows about the online Emergency Data System and how to sign up," he said.

The electronic form, on the personnel center Web site takes most people about 15 minutes to complete, officials said. It asks them questions about which relatives should be contacted in an emergency and what are their addresses and phone numbers, officials said.

"With this system we have immediate access to civilian emergency contact information," said Thomas Perry, chief of the casualty division here.

Civilian members can access their record by logging on the AFPC secure Web page at http://www.afpc.randolph.af.mil/emds/default.htm. New users will need to first establish an account. Once logged in, civilians should press the "EMDS" button to access the form.

For more info about the civilian EMDS call the Air Force Contact Center at (866) 229-7074.