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Spotlight

The cover photo captures the power associated with the successful launch of a Boeing Delta II rocket. Dedicated professionals at the 30th Weather Squadron have a history of providing superlative weather launch support dating back more than 40 years. Using improved forecasting technology, the 30th WS is poised to continue providing their unique brand of service well into the next century.

Perspectives

What We're Doing About Staffing and Retention

By Brig. Gen. Fred P. Lewis
Air Force Directorate of Weather

As most of you are aware, Air Force staffing and retention challenges have the utmost attention of your Air Force senior leaders. These challenges are being experienced throughout the Air Force and in our sister services. I want to take this opportunity to tell you how we are dealing with these issues in our career field.

My bottom line to this article is that IF YOU ARE ELIGIBLE TO REENLIST, WE NEED YOU TO STAY WITH US. I'm asking each and every person to think twice about staying with the Air Force, and in particular AF Weather. We (the Air Force, AF/ XOW, your MAJCOM, your Wing, your bosses, your coworkers, your friends, and your customers) need your help to reengineer our career field and mission area – making both examples of excellence and service. If you stay, I promise you a much improved AF Weather – an AF Weather that you will be proud of, because you made it better, you made a difference for our organization and, most importantly, for the warfighters, operators, and trainers. Each one of you who decide to stay will make a big difference by helping increase staffing levels and reduce individual workload, while allowing us to get on with implementing reengineering. Now, on with the rest of the article to lay out what we've done and what we plan to do to make things better.

As you probably know, we have been working hard for the last 2 + years to bring about a reversal in our low forecaster staffing by using virtually every program and initiative available in the Air Force – and things are beginning to improve. But, our around-the-clock weather support mission, sudden contingencies, persistent ops tempo, and high deployment rates have made low staffing even tougher to deal with.

We're doing many things to keep our people (and that means you!) in the Air Force and we're also aggressively pursuing initiatives to bring many people who have separated or are in the Guard/Reserve back to our active duty ranks. Why you might ask? Because you need and deserve the help and besides, with more qualified people on board, we can implement reengineering initiatives evenfaster. Reengineering in Europe and Alaska has already shown significant warfighter, weather warrior, and weather ops tempo benefits--and we're only just getting started!



Several years ago, around the Fall of 95, our first term reenlistment rate bottomed out at approximately 39%. This was the lowest retention rate in recent history and started us, with strong support from AF/DP, in pursuit of a series of programs to improve staffing and retention. We started by immediately seeking a first-term selective reenlistment bonus (SRB). We were successful.

But this was only the start. Since mid 95 we have been successful, again with AF/DP support, at implementing a wide range of other initiatives.

These include:

- an increase in the first term SRB with a multiple of 2.5
 - a second term SRB with a multiple of 1.5
- special duty assignment pay for weather parachutists (\$55/month to start increasing to \$165/month after one year)
- special duty assignment pay for Army tactical weather support (\$55/month increasing to \$165/month after one year) enlistment incentives for recruits who enlist for 6-years and recently, new recruits to the weather career field receive an enlistment bonus of \$1000 for a 4-year enlistment and \$6000 for a 6-year enlistment
- extended active duty tours for ANG and Reserve forecasters.

This program brings enlisted forecasters and officers from the Guard and Reserve back to active duty for two to four year tours:

- early return to forecaster school for select apprentice/journeyman volunteers with 2-years time in service
- a prior service return to active duty program which allows weather people who have separated to return to active duty

These initiatives have already been successful in some respects. Our retention rates, in particular, have been at or slightly above Air Force averages for the past year.

See Retention on Page 4

Perspectives

Retention

continued from Page 3

FY 98 Retention statistics

	first term	second term	career
AFW	53.7	74.6	92.6
AF	53.8	68.8	92.6

But we aren't satisfied yet. We need to do more and we are exploring other initiatives, but as I stated above, we need your help and support to turn the corner. You are needed to make any of our solutions successful, once again, if you are eligible to reenlist — stay with us, we have a bright future and we need you on the team. If you are a supervisor, please work closely with our people to show them the benefits of staying with us (and I know many of you supervisors are doing just that).

To develop a better understanding of where our staffing is headed, we recently began the development of our own "staffing flow" model by leveraging our "weather modeling" expertise (after all, that is something we're pretty good at) to deal with staffing and personnel flow challenges. With the assistance of manpower modelers from the AF Center for Quality Management Innovation (AFCQMI), we have developed a prototype model which allows us to track our enlisted people from initial skills training to separation – including almost every key career stop in between. We call this model the "virtual faces model" or VFM since it cannot exactly track individual people, but can give us a forecast for overall staffing levels as our people flow through their careers.

With the aid of the VFM, we can see what our future career field staffing would have been like if we

had done nothing over the past 2 + years to improve the downward trends in staffing and retention. I know this is a bit unrealistic, but it provides a baseline to determine how our ongoing initiatives are impacting our staffing levels. We now have a good idea of the positive impacts our collective manpower and retention initiatives are having on our staffing levels. The model will also give us a monthly "picture" of our staffing health as we move forward to implement our reengineering initiatives. The first results are encouraging and they re-enforce that we are on the right track. The diagram illustrates the "do nothing," the "retention initiatives," and the estimated "reengineering" results. Note that the even though the retention initiatives improve our staffing levels, the most significant, long term improvements will come once we can implement our reengineering efforts.

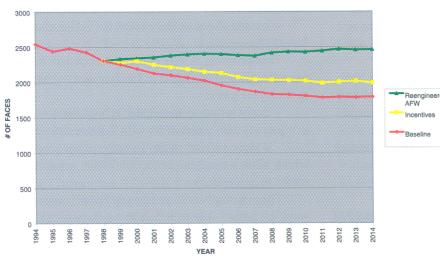
As I implied above, the staffing and retention problems we're experiencing today are really AF-wide problems. Many of you probably have heard of (or have seen) recent articles on the Air Force becoming an Expeditionary Aerospace Force (EAF). The EAF will have profound implications on how we "Train and Fight" to handle the current high ops tempo. One significant aspect of the EAF initiative is to have a deployment "work-up" cycle where units and people will know when they will and when they won't be "on-call" for possible deployment. This will have a positive impact on our people and how we deploy our forces. This is just one of the many benefits of the EAF and I would ask each of you to find out more about this important AF initiative.

I would also personally ask a few things of each and every one of you. First, please don't overreact to the staffing and retention problems we're dealing with today.

I know this is hard to do when you are working 12-hour shifts with little time off, but please realize the Air Force and Air Force Weather are working short-term and long-term solutions to improve this situation. I would further ask you not to blame the current staffing problems on our reengineering initiatives. Reengineering isn't the problem. Reengineering is the answer - the long-term solution! Unfortunately, the transition to our reengineered state will put a strain on our forces. My staff and the MAJCOM Colonels and Chiefs

AFW TOTAL FORCE COMPARISON

BASELINE VS REENLISTMENT INCENTIVES FY94 - 14



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Perspectives

Special Obs: The "Lead Bullets" -- a Closer Look

By Chief Master Sgt. Tony Ramirez Chief, Enlisted Matters

Air Force Directorate of Weather

Staffing and retention challenges have our full-time attention. Like the rest of the Air Force, we are experiencing some challenges in staffing our weather units and keeping our trained and experienced people – especially as we reengineer. AFW reengineering is the long-term solution but we must work hard in the interim to resolve shortfalls. The General's article in this ObserveR and an article published in the 16 Nov 98 issue of the Air Force Times, outline the "lead bullet" (staffing and retention) initiatives we have been employing to bring our forecaster staffing and retention levels "up to speed". Here are some details of how these initiatives are working.

We believe we must maintain reenlistment percentages above AF targets for the next few years in order to offset the low forecaster staffing levels propagating through our SrA forecaster and SSgt forecaster ranks. This becomes especially important as we draw on our forecasters to reengineer to an OWS-CWT operational structure. For these reasons, we will continue to do everything we can to maintain Selective Reenlistment Bonuses (SRBs) for our career field. Although not the total solution, SRBs are keeping us in the game. Since the first term SRB was increased and the second term SRB was reinstated, our retention levels have been at or above the AF averages. In addition, partly due to the SRBs, cross-training-in quotas are depleted within the first quarter of each FY they are offered. We are continuing to draw extremely qualified and talented people from other career fields. Although drawn to some extent by the bonus money, these individuals are looking for unique challenges by staying with the Air Force and joining us in our challenging, ops oriented career field.

A somewhat troubling aspect of first-term retention is that approximately 25% to 30% of those who enter the Air Force don't stay with us to the full completion of their first term. The retention statistic that accounts for this is referred to as the "keep rate". In many ways this rate is just as important as the reenlistment rate. AF/DP has recently asked commanders to limit "miscellaneous" separations to the bare minimum. For example, miscellaneous separation requests to accept employment or transition to civilian life are no longer viewed as compelling reasons, even if early DOS is for six months or less.

Special Duty Assignment Pay (SDAP) for our Parachutists and Army Tactical weather support personnel also appears to be working pretty well. Jumper manning has increased from the 50% range to around

70% over the last year or so. To be fair, this improvement is also much the result of some very persistent and creative recruiting initiatives implemented by AFSOC at

areas. Although Army support
SDAP is relatively new, the
feedback we're receiving has been positive.
Unlike Jump duty, Army
weather support duty is
not a volunteer option. This
duty requires special training,
special skills, and a mindset
somewhat different than Air
Force mainstream assignments. The

Lackland, the Schoolhouse, and other

challenges associated with Army support deserve continuation of this incentive for the foreseeable future.

The Prior Service (return to active duty) program allows prior service personnel, with up to 12 years of prior active duty, to return to active service. This too was only recently implemented and we already have had several "former observers" return to active duty in weather and become forecasters. We need to ensure that our separating Airmen get the message that the door is open to return to AFW if civilian life doesn't pan out as expected. Please make sure they get this message when they separate.

The most recent additions to our string of staffing and retention initiatives have been the new Enlistment Bonuses being offered to new weather accessions. These 4-year, \$1,000 and the 6-year, \$6,000 bonuses are great incentives and fit very well with our reengineered career flow strategy — particularly 6-year enlistees.

The message to our more tenured forecasters is this. Although many incentives are being offered to our new people, your value and contributions are not being ignored. We will continue to look hard for opportunities to compensate your contributions. But the immediate goal is to you get some "reinforcements" in the pipeline. As quickly as possible, we need to reduce 12-hour shifts, individual deployment rotation cycles, and individual short-tour and overseas rotation cycles.

High Year of Tenure Waivers (HYT) allow us to keep our people (forecasters) with us a longer. The more forecasters we have, the faster we can stand up our OWSs and reengineer. Careful, this is not a blanket program. Your responsibility is to ensure we are using this option for only our most qualified people – those who are getting the job done. We're relying on first line

See Closer Look on Page 7

Commander Forecasts Bright Future for AFWA

ByTSgt. Michael L. Jones AFWA Public Affairs

A little more than a month ago the Air Force Weather Agency underwent a management change as Col. Charles W. French stepped into the agency's top leadership position. After a whirlwind tour of directorates within Air Force Weather, French is narrowing his focus as he prepares to tackle critical issues associated with an organization in transition.

"Since being given the privilege of becoming AFWA's new commander I've had a chance to see first-hand how hard our people work," said French. "I'm quite amazed at the technological changes that have been made inside our building, they really help to direct our focus on the organization's operational capabilities."

Citing the unique abilities of AFWA personnel, and his recollections of what it was like being a young motivated lieutenant, French said he has a two-fold responsibility to his new organization. "The real reason I'm here is to help ensure the removal of obstacles that might prevent people from accomplishing our mission of dramatically improving weather operations. Once those impediments are removed I need to be sure and get out of the way so they can do just that.

"Every commander and supervisor faces the same challenge," French explained. "Leadership style has to reflect a balance between mission accomplishment and people. It's the people who get the job done. Commanders must chart the course that produces results higher head-quarters expects without burning out team members."

Realizing that vision is made even more challenging for the new AFWA commander because of the organization's total immersion in Air Force Weather's strategic reorganization plan. The plan, a collaborative effort between the Air Staff, Air Force and Army major commands, AFWA and the Air Force Center for Quality Management Innovation, details Air Force Weather's emphasis on more of its operational capabilities.

Air Force Weather's leadership huddled and identified three specific objectives designed to help reengineering efforts are successful. Those objectives include dramatically improving AFW support to field operations units while seeing the reengineering effort through to its conclusion. French shared that achieving these goals will entail bringing new hardware and capabilities on line while simultaneously streamlining forecasting operation procedures. "We'll be tapping every AFW component as we move on

to these objectives," said French.

A specific initiative supporting reorganization efforts include the establishment of regional weather centers, referred to as HUBS, both in the United States and abroad. These HUBS provide specialized weather information in direct support of exercise and real-world



military operations. There are four HUBS in the U.S. and four overseas. U.S. HUBS are regionally organized to provide time-sensitive weather coverage for all 50 states. Overseas locations, more tactically oriented, include Alaska, which recently became operational, Germany, South Korea and Japan which is scheduled for activation during the year 2002/03. French said HUBS are extremely important because they will reduce the number of people forward deployed.

AFWA career weather members also serve in highly mobile weather units called combat weather teams. These teams are mated with specific military operations and are responsible for keeping mission commanders in the field informed of possible weather conditions that might positively or negatively influence their decisions. "Fully integrating our CWTs is an operational issue we've been working diligently," said French.

"In fact, Eielson Air Force Base's 354th Fighter Wing and our Eielson-based CWT have developed a working relationship that translates into increased mission effectiveness. They accomplish this feat through cooperative tailoring of their individual capabilities to the wing's mission requirements. The results offer tremendous encouragement for the use of this integrational concept throughout military operational organizations."

Identifying change as a concept he's keenly familiar with, French recounted its role during a career that took him all over the Air Force, ultimately bringing him back to Offutt, the place where his career journey began as a young officer more than 20 years ago. "Meeting my wife here during my first Offutt assignment all those years ago was indeed a memorable experience. But coming back to work with such a dedicated AFWA family has to rank in that

News

upper tier as well.

"Major procedural shifts create some transitional challenges, but our changing environment requires organizations to adapt if they're to function optimally. There's still lots of hard work ahead of us and I know we'll get there with everyone pulling together to smooth out any rough spots we encounter. Assessing where we are now, I think

we'd all agree, that we're committed to this organizational restructuring - there's no turning back now - we have to make it work. Our expressed goal is to make AFWA a vital organization to commanders in the field. Successfully completing that undertaking requires us to be continually adaptive with the services and products we provide."

Retention continued from Page 5

understand this and we are working hard to balance reengineering with current manpower constraints. It is a daily battle and I can assure you that we are (I am) fully engaged to find more ways to improve the current situation so we can get on with rapidly implementing reengineering. As you may know, in Europe and Alaska, where we have started implementing reengineering, good things are happening and happening faster than expected. We need to get these

good things implemented across the Air Force.

Much of our "get well" will be a result of the Air Force's get well strategy. I am optimistic that all of us in the Air Force will be successful in reversing staffing and retention trends. In the mean time, we in Air Force Weather are taking advantage of every possible initiative and program at our disposal to improve the situation – and as fast as possible.

Collectively, we're doing some amazing things for the Air Force and senior leaders are taking notice.

They are seeing that fine-scale, highly accurate, and relevant weather support directly contributes to mission success.

If you would like more information on the initiatives stated above or have any other ideas, contact your MAJCOM functional manager or give Chief Ramirez or me a call at DSN 224-7410 or e-mail ramireza@pentagon.af.mil or lewisf@pentagon.af.mil. Each of you can play an important part in helping us turn this situation around – just stay with us and watch us improve!

Closer Look continued from Page 5

supervisors and commanders to make good assessments and ensure we only use this option when it truly makes good sense.

The Early return to Forecaster School program is being offered to select, Apprentice volunteers who have completed their 5-level CDC and upgrade training requirements. One year of retainability following projected graduation is required for AFPC to justify a PCS assignment. This program was implemented last year to "grow" deserving individuals into forecasters faster and to offset empty forecaster course seats. It is our last and least favored option for filling forecaster course seats. So far this FY, it has only been sparingly used – but the option will continue. Volunteers will be assessed on a case by case basis and will be selected primarily based on the availability of class seats.

The General has asked us all to step up our efforts in the retention of our people – down to each and every individual. At a critical point in our military careers we make the transition from being "members of the rank and file" into "leaders of the rank and file" – the "keepers of the institution".

We begin to understand the importance of keeping our people motivated when we see them succeed. Their successes, in large part, come from the influence we have on them and from the learning and working environments we create for them. People stay with us because they like what they do, like who they are, and have hope in what they can aspire to. The image they project and represent to their peers, family, friends, and society is also very important to them. The strength of our AFW institution is our people and their feelings of trust, security, and belonging. Please take these ideals into account as you discuss their future, the future of Air Force Weather, and the future of the Air Force with them. Our people will respond positively to any situation if we, their leadership, believe in the future and lead them toward it with confidence.

There isn't a career field in the Air Force more aggressive in dealing with its core operations, career field health, staffing, and retention as we have been under the General's reengineering leadership. We have developed a thorough understanding of the needs of our career field. Our vision is truly comprehensive and fits very well with the Expeditionary Air Force ideal. As we press on with reengineering, we will also press on with aggressively leveraging every staffing, retention, and quality of life program and incentive at our disposal.

If you work your end, we'll work ours. And we'll succeed together. The way I see it, if we "load the bases" those who come after us will hit the "grand slams"!

AFW NOTAMS

AF approves enlistment bonuses

Airmen serving in the 1W0X1 career field are among the 14 Air Force Specialty Codes to receive reenlistment bonuses. Members who fall within tier two, six to 10 years, will receive \$6,000 for a six year enlistment and \$1,000 for a four year enlistment. Members who have questions about the new enhanced bonus system should contact their customer service reenlistment section.

Reenlistment policy changes

In January 1999 at Fort McPherson, Ga, Air Force Combat Weather Center will begin evaluation of new weather observation equipment for possible military applications.

Dubbed the WeatherScene, its unique ability is its four low resolution cameras used t monitor weather and sky conditions around the sensor. Images and measured weathered elements are transmitted to a laptop computer via radio link and give a remotely located user a better picture of the distant weather situation. This commercial off-the-shelf system is currently used to record and monitor weather conditions along interstate highways in a number of cities.

Plans are for AFCWC to evaluate the ruggedness and capabilities of the system before it is deployed for use at the Udayri Range in Kuwait. AFCWC will also test remote operations of the computer, equipment, and software across other communications links. The purpose of this test is to simulate a remote weather hub gathering meteorological data from the range to make a better forecast.

Research lab hosts conference

HANSCOM AIR FORCE BASE, Mass. – The Air Force Research Laboratory's Space Vehicles Directorate hosted the first Battlespace Atmospheric and Cloud Impacts on Military Operations conference at Hanscom, December 1-3, 1998.

Modeling, simulation, measurement, and prediction of atmospheric and cloud impacts on military electro-optical/electormagnetic/acoustic systems will be discussed at the conference.

SEIs AFSCS

Use of Special Identifiers Improves Management of Critical Resources

Weather functional managers at the major commands and the career field manager have a number of different classification tools available to them to help them do their job. The most familiar of these is the Air Force Specialty Code. However, there are other, perhaps less well known, tools which the weather career field has under utilized over the past few years. This tool is the special experience identifier. We must take better advantage of SEIs to help us effectively manage our resources.

SEIs are intended to capture information on an individual's special experience and training not otherwise identified within the personal data system. They complement AFSC prefixes, suffixes, etc., and permit rapid identification of a resource already qualified to meet unique circumstances, contingency requirements, or management needs. SEIs provide a means to track individuals and identify positions requiring or providing unique experience or training that would otherwise be lost. They may be used to better distribute personnel and optimize the specific person to job match as much as possible.

Weather personnel can be awarded seven different SEIs. These SEIs and the requirements for their award are listed in AFMAN 36-2108, Attachment 40. Additionally, HQ USAF/XOWR sent a message to the field discussing the importance of SEIs, listing those applicable to weather, and providing the criteria for award. All weather units should have received a copy of this message, dated 011552Z Jul 98, and entitled Authorization, Criteria, and Award of Weather SEIs. Have you evaluated your personnel to determine if they meet the criteria for an SEI and taken action to award it if they do?

By doing your part to evaluate your personnel's duty responsibilities and experience and awarding them SEIs when they meet the criteria, you contribute to the effective management of the entire career field. The end result is that you will stand a much better chance of receiving an individual who already possesses the special skills or experience your mission requires when you need them the most to meet an important mission requirement.

Weather Unit Adds Training Tool to Arsenal

Standardization Procedures Generate Positive Reception

Tired of hearing "That's not the way I was taught?" Help is on the way! The Technical Training Branch is writing a series of training packages for the graduates of the Initial Skills Course due out the summer of 1999. The first set of Qualification Training Packages will standardize training programs across Air Force Weather and serve as certification training for weather apprentices who have recently arrived at the hubs.

QTPs are not replacing existing skill-level upgrade requirements. Their emphasis is solely on the qualification phase of upgrade training. In conjunction with the experience gained at the first duty station, the QTPs will provide a knowledge base for the apprentice to complete the Career Development Course. The skill-level upgrade requirements have not changed.

To be upgraded to the 5-level (Journeyman) you must:

- ☐ Complete 15 months of on-thejob training
- ☐ Be certified on all 5-level core tasks identified in the CFETP
- ☐ Complete the appropriate CDCs
- Be a senior airman
- Be recommended by your supervisor

To be upgraded to the 7-level (Craftsman) you must:

- ☐ Complete the appropriate specialized course
- ☐ Be certified on all 7-level core tasks identified in the CFETP
- ☐ Attend the 7-level craftsman school
- ☐ Be a staff sergeant
- ☐ Be recommended by your supervisor

The QTP is not a weather invention. Other career fields have used them with great success. QTPs con-

sist of four parts: job qualification standards, trainer's guide, trainee workbook and an evaluation package. The JQS ensures standardized documentation of completed QTPs in a person's training record.

The trainer's guide and the trainee workbook standardize OJT guidelines for Air Force Weather personnel. The evaluation package contains all written exams, performance applications and confirmation keys.

Not designed as a

cure-all, QTPs are a step toward consistency in training. They will help ensure that all new apprentices are trained to a basic level no matter where they are assigned. They will provide a solid foundation to customize training programs and a logical outline for conducting training.

Major commands are currently reviewing and testing QTPs for climatology, PMSV, synoptic meteorology and observation. Feedback has been extremely positive. The training section will incorporate recommendations before releasing the final versions to the field.

11 Core QTPs for 1999

- 1. Climatology
- 2. Pilot to Metro Service
- 3. Weather Radar
- 4. Observing
- 5. METSAT
- 6. Forecast Models
- 7. Synoptic Meteorology
- 8. Analysis and Prognosis
- 9. Briefings
- 10. Forecast Product

Development

11. Weather Element Forecasting

Almanac Submissions Requested



nac. All weather units should email all updated information about their unit to the Air Force Weather Agency's Public Affairs Office by 1 March. Email addresses to the Public Affairs Office are:

Observer@afwa.af.mil or jonesm@afwa.af.mil.

It's time to put together this year's Air Force Weather Alma-

Questions or suggestions concerning this year's almanac can be directed to TSgt. Michael Jones through the email addresses above or by calling DSN 271-3115.

Air Force Weather Retools

Training Emphasis Shifts to Future Ops Support

Reengineering Air Force Weather presents us with a great opportunity to improve the training and professional development of both our enlisted and officer corps. We also have an opportunity to address the many documented shortfalls in our training programs and processes. Effective, efficient, and timely training and career growth are essential to our strategic vision of ensuring the warfighter "exploits the weather for battle." We will need your commitment, support, and feedback as we implement our weather training revolution for the 21st Century.

On August 18, 1997, the Air Force Vice Chief of Staff gave the seal of approval to the AFW Strategic Plan, a wall-to-wall road map for AFW reengineering. This detailed, comprehensive strategic plan sets forth the essential elements of our envisioned end state. One of the six primary areas for improvement addressed in the plan falls within the broad area of Training. As stated in the plan, AFW intends to "revolutionize training—to create a continuous, efficient, and effective training process." Your senior Air Force and Weather leadership realizes and acknowledges the critical part training and professional development will play in the overall reengineering plan.

The recent activation of the Air Force Weather Agency marked a significant, but subtle, milestone in the management of weather training. Within the AFWA organizational structure, we have established an Aerospace Services Training Division, as a key component of the reengineered Field Operating Agency. AFWA/DNT has a charter to oversee and implement the "revolution" in weather training. Among other responsibilities, this division is attacking the training problems which exist today while proactively focusing upon the long-term, end-to-end training vision of the future.

The AFWA has launched a series of early initiatives as part of their charter. Our goal is to strengthen training across our enlisted (and officer) career field while devel-



oping short- and long-term strategies needed to support the demands of a reengineered AFW. To kickoff the strategy, AFWA/DNT developed a comprehensive task listing from many sources (occupational survey, current training documents, and workcenter visits). Weather functional managers at the major commands evaluated a list of over 1,500 tasks. Their feedback and inputs from the field led to a better definition of the functions and job tasks to be performed in the Operational Weather Squadrons, Combat Weather Teams/Weather Flights, and Strategic Centers. Lessons learned from the initial activation of our Alaskan and USAFE OWSs, currently underway, will also enable training analysts to refine the task list by workcenter, position, and skill level.

A five month career field-wide Utilization and Training Workshop process, conducted from January through May 1998, brought together our training professionals and MAJCOM weather managers. This group further refined the task inventory as a precursor to developing a significantly revised Enlisted Career Field Education and Training Plan and first-ever Officer CFETP. These documents will set in motion far-reaching changes in training necessary to support our reengineered AFW organizations. Training and standardized technical references will be developed and presented through a robust combination of formal, resident Air Education and Training Command courses, AFWA-developed master training programs, and external education and training initiatives. Distance learning technologies and structured on-the-job training programs constitute essential elements of our approach to workcenter

To support the activation of the Alaskan and USAFE weather squadrons, the Keesler schoolhouse faculty has increased the selection of "fast track" candidates. Working with the AF Personnel Center weather functional manager and Keesler faculty, we will initially support the 3-level OWS forecaster manpower requirements with the "fast trackers." The relatively small number of 3-levels required to stand up our initial OWSs through 1999 will preclude the need for an interim training strategy, as earlier envisioned. During this period, our Career Field Managers, AFWA Training Division, and AETC Training Managers will be working to retool existing course standards and design formal, resident courses to support our end-state

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weather organizations.

As part of AFW reengineering, we need to make a paradigm shift away from our current cadre of observers and forecasters. Rather, we need to think of our enlisted force as consisting of 3-, 5-, and 7-level weather apprentices and technicians. As we do so, this will bring AFW in line with other Air Force specialties. All weather apprentices and technicians will be capable of performing weather tasks commensurate with their training, skill levels, and assigned responsibilities. In the reengineered end-state, we will optimize use of manpower and create duty environments which are fully integrated into the operator's full range of missions and weapons systems.

Our first step in retooling resident training will be to rebuild our experience base by focusing initial skills training on our five core proficiencies (collection, analysis, forecasting, tailoring, and communication of weather information). The Initial Skills Courses will be re-designed to train entry level personnel for initial assignment to one of our OWSs; therefore, instruction will include more meteorology, analysis, and basic forecasting skills for enlisted and OWS tailored training for the officers. Observing skills, for the enlisted force, will be limited to those directly related to, or supporting, the forecast processes. Using the results of our task analyses and feedback from Alaska and USAFE, we will target officer and enlisted initial skill courses to OWS position task proficiencies. Training will focus upon the collection (metwatch, analysis, and forecasting) of weather information and the processes in the production of weather warfighting products. Upon successful completion of the respective ISC, officer and enlisted personnel will be assigned to an OWS.

It is within the OWS environment that new apprentices and second/first lieutenants will receive OJT from senior NCOs, field/company grade officers, and experienced contract trainers. Through a combination of standardized and structured training packages, qualification training packages, distance learning courses and seminars, and other state-of-the-art training technologies, we will develop skills and experience needed to enhance support to the warfighter.

Through a concept of continual learning and professional development, our enlisted folks will be awarded a 5-skill level after completing qualification training, a career development course, and a minimum of 15 months of OJT. Our junior officers will complete a qualification training process, geared toward Operational Meteorologists, and the requirements to be specified in a soon-to-be published officer CFETP. Essentially, after completing qualification training, our enlisted and officer corps will continue training and learning to exploit meteorology and state-of-the-art weather tools and models throughout their OWS tours.

Following the OWS assignment, we envision a training process consisting of distance learning modules, train-

ing packages, and a resident Combat Weather Course. The exact duration and curriculum content is a work in progress as we seek to refine our initial requirements based upon the transition of base weather stations to the CWT/WF functions. This new advanced course (advanced forecasting/advanced observing modules) will prepare our experienced technicians and officers for a challenging assignment to one of our front-line CWT/WF locations. On a macro-scale, CWT/WF training will focus upon tailoring OWS-produced weather products for specific operational missions.

The most critical aspect of CWT/WF duty and training will be the timely, accurate, and relevant translation of the products to the operator/customer. Experienced weather personnel will be fully integrated with the warfighters thus facilitating highly accurate, fine scale execution forecasts. CWT/WF training is likely to focus upon topics such as advanced meteorological applications, observing, weather products, mission planning and briefings, electro-optics, use and application of combat weather systems and equipment, and weather impacts and sensitivities upon air, ground, and space battle prosecution. The AFWA, working with training professionals and our Combat Weather Center, will develop a structured training program geared to the needs of the CWT/WF function and the operator.

The Air National Guard and Air Force Reserve have committed their support to the overall AFW reengineering plan. We envision the Guard and Reserve forces attending the same resident courses as our active duty enlisted folks. However, in order to prepare the ANG and AFRC as Force Multipliers, the training timelines will likely need to be compressed for the follow-on training. Of course, the follow-on training will be critical to a smooth and effective transition between the formal OWS and CWT/WF resident courses.

For example, the ANG tentative envisioned end state outlines a form of "Fast Tracking" plan for all new weather personnel: the OWS course, 75 days follow-on training at an OWS, back to resident training for a CWT/WF course, and 45 days follow-on training at an active duty CWT/WF before returning to the home unit. The 75 days at an OWS location largely replaces the 3-year period for an active duty counterpart. Of course, the ANG and AFRC personnel will build upon that training during their monthly Unit Training Assemblies.

Active duty officer and enlisted personnel will continue to follow a logical career progression plan throughout future assignments and challenging positions within AFW. Follow-on assignments could include another OWS or CWT/WF, a Strategic Center, or to a MAJCOM or Weather Squadron staff position. Regardless of the as-

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AF Weather Retooling continued from Page 11

signment or level of responsibility, we are committed to developing and implementing a lifelong training program to better prepare our weather forces than ever before. The training technology will be the enabler to make continual learning a reality.

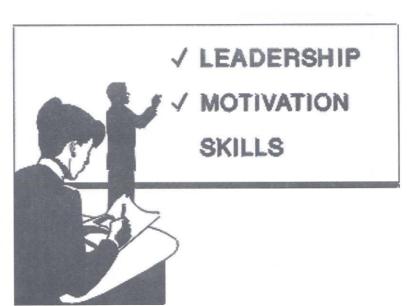
A key aspect of our overarching training strategy for preparing our 21st Century weather warriors is the use of mentors. It is through this group of highly experienced (and respected) weather mentors that we intend to build the experience and confidence of our younger, inexperienced airmen, NCOs, and officers. Mentorship is a critical element of our overall AFW training design/structure. We will have both experienced weather professionals and training experts and facilitators avail-

able to assist personnel in meeting the demands of the operator and battlefield commander.

I've mentioned the concept of distance learning several times. Distance learning is a reality both in the civilian world and increasingly in the military environment. The Air Force and AETC are looking to increase the use of distance learning technologies as a means to provide more timely and cost-effective training. Distance learning, and its associated technologies, offer exciting opportunities for providing more effective and efficient training to a large population of geographically separated people. For example, AFW and the Keesler faculty recently converted the Electro-Optics Course to a distance learning format. Distance learning has proven to be a viable alternative to resident course education, both in civilian and military environments.

We believe there will be a greater application of distance learning technology in the years ahead. However, there are two paradigm shifts required by distance learning. First, there is the shift from training (instructor-driven) to learning (learner-driven). Distance learning requires the learner to take greater responsibility for the educational process. Second, there is the shift from traditional classrooms to job site training. Educational studies have shown there is no significant difference in effectiveness between distance learning and traditional instruction methods. The media and format keeps the trainee actively involved in the training process.

We view distance learning as an excellent opportunity to provide more timely and relevant training to a broader segment of our weather force. Many of the current supplemental weather courses will be candidates for opportunity and distance learning conversion in the future. As we continue to reengineer weather and design your training programs, the technology, such as distance learning, internet-



and intranet-based training, and computer-based training will enable AFW to train our force better.

One of the most common complaints I've heard in my travels as Director of Weather has been "we don't have the time to train." One of the benefits to AFW reengineering is the creation of time and an environment for training. Historically, we've all been guilty of not placing a priority on training. This has to change. Advances in technology, the science of meteorology, and the complexity of warfare demand even more timely, accurate, and relevant weather information. To do this, we must train our weather force to an increased level of competence.

Operating the same in peace as war and better integration with the operators (a key tenet of the CWT/WF philosophy) will greatly enhance our training and proficiency. That is precisely why training is one of our top six goals; "continuous training is a must" represents one of our AFW enduring principles.

As articulated to senior Air Force leaders, Air Force Weather is committed to an end-to-end reengineering plan that meets the needs of the 21st Century warfighter. An absolutely critical tenet to this envisioned end state is our commitment to revolutionizing our training, professional development, and career progression. Success in these efforts will foster improved job satisfaction and operational support. We must instill a commitment to lifelong learning and create a career mentoring environment across all of our AFW community.

I am optimistic that we can meet the challenges while exploiting the opportunities. At the same time, we will correct the shortfalls of the past in our training and professional development programs. Through a successful strategy of continuous learning, focused mentoring, and responsive and timely processes we will optimize our organization. "Exploiting the Weather for Battle" will become a reality!

Air Force Weather Officers Compete for Top Leadership Positions Through THOR

by Maj Lou Zuccarello
Chief, Weather Officer Assignments
HQ Air Force Personnel Center

The Air Force Weather Thor's Leader Board ensures top officers fill key weather positions which are vital to successful Air Force mission accomplishment. Developed in 1994, Thor's Leader Board process targets two primary objectives. It identifies a candidate list of best qualified officers to fill squadron command and other key positions within AFW. Additionally, it highlights weather officers with command potential for future Major Command positions.

The board is held annually at Headquarters Air Force Personnel Center and is chaired by Brig. Gen. Fred Lewis, Air Force director of weather. The board is composed of colonels from each MAJCOM, the Air Staff, and AFWA. It uses procedures consistent with those used by other AFPC boards.

Selection is on a best qualified basis of those officers judged to be fully qualified for Thor's Leader positions. Selection of the best qualified officers is based on leadership potential, as evidenced by past performance and anticipated long-range contribu-



tion to the Air Force. Some of the factors considered are: duty performance as reflected in evaluation reports, breadth of experience (including leadership), job responsibility, professional qualities, academic and professional military education, and specific achievements.

Selection emphasizes the whole person concept rather than single evaluation factors. Selection as a Thor Leader is not a reward for past performance. It is a means of advancing those who have shown potential to fill key AFW positions and lead our most important warfighting organizations as demonstrated by their ability to handle progressively more challenging jobs.

The following general guidance is used in the Thor's Leader selection process:

Demonstrated Leadership

The Air Force needs officers who can conceptualize, chart strategies, and

organize solutions to problems. The board is looking for officers who provided the

direction and force that shaped the outcomes rather than reacted successfully to a series of events. Each officer's record is evaluated on the basis of performance in assigned duties, all of which are important.

Demonstrated Potential

There is no norm or preconceived career path that leads to success. Demonstrated performance as a weather flight commander or detachment commander is an important factor in determining Thor's Leader selections. However, performance in other key leadership assignments, including supporting staffs, administrative, managerial, and technical positions are also important measures of an officer's ability to lead and command. In addition, evidence of an officer's innovation and ability to work with others is another indicator of an officer's ability to lead and command.

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THOR ELIGIBILITY REQUIREMENTS

- · Must be fully qualified as 15W core weather officer.
- Must be a Major within 2 years of IPZ Lt Col Board, a Lt Col Select, or a Lt Col not IPZ/APZ to Colonel.
- Must attain a minimum of 12 months time on station prior to the first day of the next calendar year.
- Must attain a minimum of 24 months in current position prior to 1 Jul of the next calendar year if currently in a joint billet or critical acquisition position.
- Must sign a volunteer statement stating "I do desire consideration for this selection board. I understand I am a worldwide volunteer for any subsequent assignment action as a result of this board's selection decision. I also understand that if I decline a Thor's Leader position once the board meets, I do so with prejudice and will be removed from Thor's Leader consideration for a period of 2 years."

AF Weather Spearheads Efforts Formulating Y2K Solutions



by AFWA's Y2K Team

By now, there may be a quill-wielding scribe in a far-off monastery who hasn't heard about the Year 2000, or Y2K computer problem, but it's doubtful. The Y2K problem, or "millennium bug" as it's sometimes called, is the hottest topic in information technology circles today. Its possible repercussions are being discussed in depth in everything from business publications to "radical right wing" talk radio. What's all the fuss about, and what are the real issues?

Y2K uncertainty!

The simple explanation is until recently, computer storage was extremely expensive. Initially, to use the computer's limited memory capability programmers used two digits rather than four digits to encode years. This works just fine until computers are required to differentiate between say, 1 January 1998 and 1 January 2000. Using two-digit encoding, 00 minus 98 gives you negative 98. Now let's assume a device. say a Radio Frequency Transmitter, uses an algorithm to increase gain as a function of the time since the last maintenance was performed. Using our example

dates, maintenance was last performed minus 98 years ago. What's going to happen? Best case scenario is the device simply shuts down. Worst case scenarios could involve significant personal injury if computer driven equipment malfunctions.

If that isn't enough, there's no guarantee that 00 - 98 = -98. Depending on the programming style used, a computer can come up with several answers. But, midnight December 31, 1999 isn't the only pothole on the information super highway; there's also the leap year issue. There are special computational rules that apply to leap years. So, depending on whether the programmer knew all of the rules, the system may or may not handle the Y2K situation properly for applications that use day of the week and Julian dates. But, if there is a problem, it

won't show up until March 1, 2000.

Fixing these kinds of problems requires close examination of software and hardware, testing components in a Y2K calendar date environment, configuration management, etc. There may not be enough time for everyone to fix all the problems they are aware of. So the real problem with Y2K is uncertainty, nobody knows for sure what will happen. Lt. Gen. Donahue, Headquarters USAF director of communications and information and commander of the Air Force Communications and Information Center, addressed the Y2K issue in an interview published in the May 1998 issue of Intercom magazine. Discussing the complexities of the issue, Donahue explained that crafting a Y2K solution is made more difficult because all of the systems in use are not under Air Force control. Additionally, most of the software is commercially acquired and modified for specific use. Citing these uncontrollable factors Donahue said we have to expect that we will not get everything fixed.

Air Force Y2K Program

The Air Force Y2K program is managed by the Air Force Y2K Program Management Office at Scott AFB IL. Their primary management tool is a relational database called the Air Force Automated Systems Inventory. The processes involved in Y2K compliance certification are precisely tracked in this database. Certification is a cooperative effort between program managers and certifiers to prove "due diligence" was followed in the analysis and correction of automated information systems. In other words, if the system is certified, it ought to continue working at and beyond the beginning of the Y2K. The Air Force takes this issue very seriously and re"Our mission is to deliver our combat forces highest quality weather and space information availble"

> Brig. Gen. Fred Lewis HQ USAF Director of Weather

quires a general officer or member of the senior executive service to actually sign the certification document for each system.

Air Force Weather and Y2K

"Our mission is to deliver to our combat forces the highest quality weather and space information available," said Brig. Gen. Fred Lewis, HQ USAF director of weather. "Fulfilling that mission is virtually impossible without dependable weather information systems. Every information system, those collecting observations to those generating and disseminating products, and the related communication channels, must be available to meet the challenges associated with our mission."

Because weather data is a critical factor in every operational mission Lewis directed that AFWA systems be certified Level I Y2K compliant. Level 1 compliance provides the highest level of confidence to users and ensures them their systems will continue function through Y2K's arrival. At a recent Air Force Y2K Technical Exchange Meeting, the AFW community was one of the few that indicated they were meeting this high standard.

"We've been working extremely hard to meet this tough, but important standard of operations," said Col. Linda Quintero, AFWA's director of communications and information. "Of the 21 information systems considered mission critical for AFW, over half are already certified as Y2K compliant with the balance expected by Mar 99, well ahead of potential problems. Certification is not the final step in the Y2K process. The question of whether the systems will work in wartime and during the exchange of data sets with other federal weather processing centers still remains. We fully expect to find problem areas during our certification process and our marching orders are to remedy them quickly."

Tackling Y2K proactively, AFWA, under the auspices of the Office of the Federal Coordinator for Meteorology and Supporting Research, is leading the Special Action Group for Y2K Testing. This group will plan and execute a series of data exchange tests between the major processing centers: Air Force Weather Agency, Fleet Numerical Meteorology and Oceanography Command, Naval Oceanographic Office, National Weather Service, National Oceanic and Atmospheric Administration, National Environmental Satellite Dissemination and Information Service, Naval Oceanographic Office, and the Federal Aviation Administration. These tests will take place in January and February 1999 and will verify data transmission capabilities. In addition, AFWA data will be put through simulated production processes operating in a Y2K mode. Since these are center-to-center tests, no products will be shipped to individual forecasters. The outcome of these tests will provide an even higher level of confidence that federal weather systems will work together in 2000.

In the warfighting arena, most FY99 exercises will include Y2K operational evaluations. While details are still evolving, AFW plans to fully participate in these exercises. This will give us, and more importantly our customers, one more level of assurance that when Y2K hits, our systems will operate without interruption and weather products will flow to the warfighter.

The AFW community is working hard to exterminate Y2K bugs. Will we find them all? No! This is why Y2K contingency plans are important. Air Force requires that each wing-level unit have a continuity of operations plan to deal with Y2K problems. The purpose of continuity planning is to provide a road map of predetermined actions which will reduce ad hoc decision-making during the crisis when the risk is high, resume critical processes/services quickly and enable continuation of mission operations. AFI 10-232, Year 2000 (Y2K) Continuity of Operations, spells out the requirements, and further guidance is available in the Air Force Year 2000 Continuity of Operations Planning Guide available from the Air Force Y2K office at afcaafy2k@scott.af.mil.

AFW personnel with questions about Y2K should contact the AFWA Y2K office at DSN 271-1390, commercial (402) 294-1390 or via email at afway2k@afwa.af.mil

Career Development Courses Qs and As

What are Career Development Courses?

Career Development Courses are independent study materials and a mandatory part of the upgrade training process. The CDC provides knowledge critical to a weather apprentice's growth. There are two weather career field CDC writers who work for the Chief, Training Development Element of the 334th Training Squadron, Weather Training Flight at Keesler AFB, MS.

What are the CDC writer's responsibilities?

Our CDC writers interface with Air Force's Director of Weather enlisted career field and MAJCOM functional managers. They are entrusted with drafting, ensuring publication, and maintaining currency of course materials. The CDCs for weather personnel is being reengineered and should be completed by summer 1999.

Weather's No Showstopper

Squadron's Forecasting Abilities Help Diffuse Mother Nature's Wrath

Vandenberg's 30th Weather Squadron plays a vital role in maintaining American space superiority. For nearly 40 years, Vandenberg Air Force Base and the Western Range has provided support and facilities to launch satellites and conduct operational testing of

By Capts. Joseph and Melissa Kurtz

30th Weather Squadron

launch satellites and conduct operational testing of intercontinental ballistic missiles. During the last 10 years, more than 140 rockets and missiles have blasted off from Vandenberg, delivering over 100 weather, communication, and scientific satellites into low-earthorbit and targeting hundreds of dummy warheads on Kwajalein missile range, the target location for the ICBM re-entry vehicles. Approximately 23 launches took place

in 1998, and even more are slated for 1999 as new launch vehicles and programs carry Vandenberg into the next millenium.

Carrying out a successful launch requires the combined efforts of all 30 WS personnel, from the commander to the first-term airman. The squadron's Operations Division provides round the clock observing, forecasting and warning support tailored to the spacelift mission. The Systems Division bears responsibility for acquiring and maintaining some of the most advanced weather technology in the Air Force. The 32 men and women of the 30 WS continually meet the challenges provided in this dynamic, demanding environment.

I here are several key functions that must be executed in preparation for a launch. A team of highly specialized weather professionals assembles as part of the Launch Weather Team. This team uses the expertise of individual team members to ensure safe, successful launches. The LWT is comprised of the commander, operations officer, launch weather officers, range weather and toxic forecasters, balloon editor, and an upper-air balloon team. The LWO is the core of the weather team and is responsible for compiling and evaluating weather information gathered by LWT members. This information, vital in making critical launch decisions, is then coordinated with other launch agencies to help predict optimal weather conditions for the launch window. Ultimately, LWOs make Go/No-Go



A1C Candie Fuson prepares a jimsphere (weather measurement device) in support of a launch.

launch decisions recommendations based on the information gathered.

Forecasters and observers have equally daunting tasks. The Toxic Forecaster uses upper-air and boundary-layer data to forecast wind speed, wind direction, and humidity from the surface to 10,000 feet. In the event of a catastrophic vehicle abort this information is invaluable. RWFs and observers dutifully scan the entire central coast for any mission-impacting weather well before it occurs.

The information supplied by balloon operations also play a pivotal role in determining pre-launch weather conditions. Balloon Editors coordinate balloon activities and are responsible for quality control of the upper-air data delivered to the launch agency and flight safety. Upper-air observers launch up to 10 data collection devices prior to countdown that detect wind shear and characterizes wind profiles up to 100,000 feet. Launch agencies like Boeing and Lockheed-Martin require these detailed descriptions of upper-level wind conditions to help determine if the launch vehicle is capable of flying through the atmosphere without disintegrating. Safety officers also rely on this information to predict potential debris patterns and solid rocket booster stage impact points.

The squadron provides a myriad of products from the day the vehicle components and satellite arrive, through vehicle stacking or missile emplacement, satellite mating, fueling operations, and finally launch. The LWO and RWF keep a constant vigil, monitoring weather constraints such as winds and thunderstorms. For example, during the processing and stacking of the vehicle, strict wind constraints must be followed to prevent damage to the vehicle and its payload. This evaluation of constraints continues right up to launch day.

A typical launch day begins with the balloon team arriving at the balloon release facility to begin launching balloons 6 to 8 hours prior to the launch. The LWOs typically go on-console about 5 hours out. Once onconsole, the LWOs, together with the rest of the LWT, evaluate a specific set of Launch Commit Criteria for natural and triggered lightning avoidance. User constraints, which may consist of surface wind and precipitation restrictions, also require careful evaluation. The LWO must ensure "clear and convincing evidence exists" there are no constraint violations to recommend a "Go" for launch. Given the number of constraints, together with the variance in criteria for different types of launches, teamwork is paramount.

M onitoring the weather can be a difficult job, even when no severe weather threatens the immediate area.

However, during last winter/spring the squadron reached the pinnacle of performance as very intense weather hit the California coast. Throughout February the squadron issued 73 weather warnings for strong winds and heavy rain. The base experienced two hurricane-force storms within a 4-day span. Both storms punished the base with winds in excess of 50 mph at the airfield and more than 100 mph at higher elevations. The squadron locates most of its range tracking and telemetry antennas at those higher elevations. Vandenberg and the surrounding community received nearly 10 inches of rain, and the base sustained \$35 million worth of damage during those two storms alone. Suprisingly, no weather-related injuries were reported, largely due to preparation and accurate forewarning by the weather squadron.

The 30th WS, base and community bore the brunt of El Nino's February fury. Four rockets were launched and the base forged through an Operational Readiness Inspection as evidence of its true grit during that month. Getting these launches off the ground proved to be an enormous project and an unprecedented success story. Launching one Boeing Delta II alone demanded 10 tries over a 14-day period. The launch attempts were scrubbed five times for violations of the natural and triggered lightning LCC and four times because the vehicle couldn't fly safely through the upper-level winds, all as forecast. Finally, when the weather caused a backlog of three vehicles on their respective pads waiting to be launched, the wing commander turned to the weather squadron to effectively take on launch scheduling. After studying all the constraints for each vehicle and the weather over the next 10-day period, the LWT recommended acceptable days to launch each vehicle. This strategy resulted in 100% mission success, as all launched on recommended days.

Through all the trials of numerous scrubbed attempts and continuing strong storms, the 30 WS performed exceptionally. The unit received an "Outstanding" rating during the ORI, with the LWT for the Delta II lauded as a "Professional Team", and the Wing Commander also honored the squadron for their outstanding work in February as the Wing's Most Valuable Player.

Although the squadron members often work for weeks on end, at all hours and with little break during a busy launch season, a genuine sense of satisfaction is the reward when a launch goes. Moreover, the positive feedback from wing leadership and customers alike remains overwhelming. The professionals who make up Vandenberg's weather team stand ready to ensure the safety and success of countless more launches, well into the next century.

COMMNICATION'S HUB Premier Technology Helps Maintain Korea's Armistice

By 1st Lt. Dave Vollmer 607th Weather Programs Officer

Today's Republic of Korea, although an advanced, industrialized, and modern country still hinges on unstable footing with 37,000 U.S. troops working with more than one million members of the Republic of Korea's armed forces. An integral player in the midst of these forces is the 607th Weather Squadron headquartered at Yongsan Garrison in downtown Seoul, South Korea.

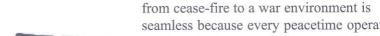
The 607th WS provides all of the ground-component weather support in the Korean theater. The squadron also supports USFK and the Combined Forces Command using the Theater Forecast Unit. The TFU supplies area

forecasts for North and South Korea and issues weather warnings and flight hazards products to support Army and Air Force operations. The TFU already performs many functions of a theater hub; therefore, transitioning to become the Korean Operational Weather Squadron came naturally.

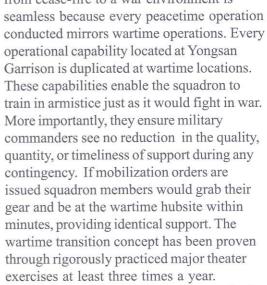
New technology has been the driving force in the squadron's ability to expand and improve mission support. The recently formed operational technology branch built and maintains an extensive Internet website with real-time NEXRAD information, high-resolution satellite imagery, local MM5 visualizations, and other vital weather information. The website is fast becoming the "one-stop" site of choice for units both in and out of theater looking for weather information.

Communications is also a key to effectively transition to the hub. The squadron uses the Theater Automated Command and Control Information Management System to efficiently support day-to-day operations. In the near future a dedicated communications link will allow the unit to access and disseminate information rapidly and in large volumes. The hub will be structured to function under the armistice conditions still in effect in Korea today.

At the pointy-end of the spear, the squadron must



have a rock-solid "go-to-war" hub concept. Transition



Of course, the one constant under both armistice and combat conditions is the unit's ability to forecast the weather in support of military operations. The hub structure improves our ability to accomplish this mission. The pool of forecasting experience and capabilities developed through

reengineering allows Detachment 1, 607 WS to capitalize on the new hub-CWT structure and provide unprecedented support to the field.

Detachment 1's mission is to support to the Army's most forward-deployed division. Comprised of six separate CWTs located at four remote Army sites adjacent to South Korea's Demilitarized Zone, its weather operations cover more than 4,600 square miles and dozens of Army installations. Detachment 1 forecasters use JOAFs as the starting point for customerfocused planning and execution forecasts. Forecasters tailor the short-range portion of the JOAF and add additional terrain and operations details in their AOR. The result is a high fidelity 0-12 hour execution forecast that is updated every 6 hours.

This approach to support diverse Army operations with accurate, detailed, and timely service has proven to be very successful. All forecast products are made available to divisions on both fixed and mobile local area networks for easy access by both commanders and the front-line operators.

Tensions in this theater continue to rise and fall; however, U.S. and ROK forces can be confident that they are getting superior weather support as they keep a watchful eye on freedom's frontier.

AF CONTRACTS STUDY OF WEATHER FORECASTING FIELD

Recommendations Aimed at Improving Operations

by Klein Associates, Inc.

Technological innovation has dramatically transformed the tools available to weather forecasters. Air Force Weather made a significant investment in technology; however, we haven't realized a large return on the investment in the form of increased forecast accuracy. To understand reasons behind this trend, the Air Force's Armstrong Laboratory contracted Klein Associates, Inc. to conduct a study of weather forecasting.

Klein Associates conducted a Cognitive Task Analysis to identify the critical cognitive elements (e.g., judgements, diagnosis, evaluation, assessment) involved in the weather forecasting process to improve forecasting performance in the Base Weather Stations and operational combat environments. They conducted in-depth interviews with forecasters who had varying levels and types of experience at Base Weather Stations and the National Weather Service. In addition, they identified the characteristics that differentiated expert forecasters from those that are less skilled.

After studying the data, Klein Associates developed several insightful recommendations which are now being incorporated into the reengineered AFW current operations.

1) Redefine the goals and focus of training. This means providing every forecaster with basic meteorological skills such as atmospheric dynamics, basic measures of weather, analysis and interpretation, and predictions methods.

2) Provide an On-The-Job learning environment that encourages and helps forecasters improve their skills. A good learning environment employs clear training and learning goals and clear expectations of individual performance.

3) Improve OJT. Effective OJT is a formal, coherent plan conducted by trained OJT providers who know how to make the most of the work context as a learning environment.

4) Improve Tactical Forecast Training. Current venues such as Combat Lightning are excellent learning opportunities; however, they squeeze too much training into a short duration. AFW must recognize the tactical forecasting situation is different from Base Weather Station forecasting and train specifically for the tactical environment. Tactical training scenarios should address the different customer demands, communications self-reliance, and obtaining alternate data sources under data denied conditions.

During the planning phases of AFW reengineering, training was a major consideration. It was evaluated at the School House, at the Strategic Centers, at the Hubs or Operational Weather Squadron, and at the Weather Flight/Detachment. Major AFW Reengineering training initiatives include:

1) AFW Utilization and Training Workshops. These were conducted to develop new (and in the officer's case, the first ever) Career Field Education and Training Plans to meet the new goals and focus of a reengineered AFW. This led to a requirement to restructure the School House to first train enlisted forecasters and officers via an Initial Skills Course, for a followon assignment to the OWS.

2) Training Flights. They will be incorporated into the OWS to provide a critical mass of experience and subject matter experts to provide effective OJT and Continua-

tion Training to new officers and forecasters out of the ISC. Air Force Weather Agency established a Technical Training Branch to develop Qualification Training Packages, computer based training materials, and distant learning strategies for the OWS, Strategic Centers, and WF/Dets.

3) WF Course. When a forecaster/officer is required to make a Permanent Change of Station to a WF or Detachment, they'll attend a WF Course where observing, wing weather operations, and tactical operations are taught. Training is provided via a mixture of a formal WF Course, OJT using established QTPs, and computer based learning modules that focus on AF weather.

Much work needs to be accomplished to provide the training materials and programs that will guarantee success. New technologies are being fielded that require us to provide you with initial and continuation training packages. We'll tailor some materials to meet the unique needs of forecasters in Europe and the Pacific. The goal of AFWA's Training Division is to be responsive to your training requirements and develop training materials that will enable you to successfully support military operations worldwide.

AFW Reengineering Business as Usual or a Military Revolution



1st Lt. Jennifer Ziemba (right) commander of weather crew operations, and TSgt. Brad Davis analyze latest conditions over Southwest Asia.

By Lt. Col. Billy Davis Commander, Shaw Operational Weather Squadron

Military revolution, according to Air War College is made up of four elements: technological change, systems development, operational innovation and organizational adaptation. The Infantry Revolution resulted from the invention of the longbow and changed the nature of battlefields from heavy cavalry to a mixture of archers and dismounted men-at-arms. The Revolution of Sail and Shot followed a change from oar-driven galleys and boarding parties to large sailing ships equipped with heavy artillery capable of sinking entire ships. AFW's reengineering may not be as obvious or impressive as these examples—yet.

The important element in these examples is that it was NOT technology alone that produced the revolution - it was the change in the operational strategy enabled by the technology. The Air Force weather community has been hard at work for two years identifying new capabilities in science, communications, software and hardware to support reengineering. AFW's Strategic Plan spells out specific changes and the creation of new organizations called Operational Weather Squadrons, but these elements alone do not constitute a revolution. If all we do is redistribute tasks and automate manual procedures AFW has not re-engineered, we have simply adapted and redefined roles and missions. To be truly revolutionary, AFW must ensure new operational concepts include new processes and products enabled by this new technology are introduced into the decision cycle at the right time. One of the early challenges will be building trust between OWSs and weather flights.

This new partnership requires ongoing education, coordination, effective training and evaluation procedures that include weather flights as "the customer." If the OWS is to be the "forecast counter" for combat weather teams they need to be aware and responsive of the requirements. Col. James Hartney, 609th Air Operations Group commander, declared initial operational capability for Southwest Asia Weather Operations Center on Sept. 30, 1998.

Though the OWS initiative is still in its growing phase, a new mind-set is being built through a process that promotes teamwork and bridges the gap from strategic centers to tactical levels. The OWS is implementing a structure that recognizes weather people as operators and paves the way for contingency planners and combat weather teams to increase effectiveness. This increased effectiveness adds value and strategically integrates weather information throughout the command decision, mission planning and mission execution process.

The next step is to transition workloads from field units to OWSs. This will reduce the deployed footprint, and help reduce operations tempo and staffing shortages at home bases. Eventually, the transition will free up weather operators to work more closely with mission schedulers and planners while refining specific weather requirements and innovative ways to incorporate the information into the decision making cycle. Eventually, the OWS will become the operational training ground for all new forecasters coming into the career field. During training they will solidify their technical skills before moving on to a strategic weather center or a combat weather team.

The OWS and the weather flights can and must work together to make reengineering all that it can and should be. Whether the mission is to sink ships or gain the home advantage by changing the nature of the battlefield, together we can be revolutionary.

TOMORROWS METEOROLOGISTS

WHAT ARE THEY BEING TAUGHT?

A brand new second lieutenant walks into your weather station with a Bachelor of Science Degree in Meteorology from the United States Air Force Academy. What might you expect that person to know? Can he apply his academic background to solve practical problems? How much training will she need to bring

her up to speed and support the mission? The USAF Academy Meteorology Program's primary mission is to provide our officers with a comprehensive overview of the science of meteorology. The curriculum's design brings us on line with what other universities are teaching and fulfills academic requirements for entry into the weather career field. All cadets at the Academy take a rigorous set of core courses totaling 112 semester hours. These courses are distributed among the basic sciences, social sciences, humanities, engineering, and military arts and sciences. The meteorology major adds 39 semester hours through courses such as climatology, physical meteorology, dynamics, synoptics, and mesoscale meteorology. Linking classroom instruction to field operating environments, our satellite meteorology course emphasizes image interpretation, a vital tool in planning operational tactics. The curriculum was further strength-

Beyond academics, the environment of a service academy offers cadets valuable experiences which they bring to their first assignment. Currently, six of the seven meteorology faculty are active duty officers. These faculty enrich their course instruction by using examples of field experiences from previous assignments. Faculty members, when asked, provide advice to cadets in making career decisions. Cadets also gain insight into the role of our enlisted members through regular interaction with the noncommissioned officer in charge of the meteorology laboratory. Between their second and third years, as part of Operation Air Force, cadets visit an operational base for three weeks to broaden their understanding of Air Force operations. Through additional coordination, meteorology majors receive an up close look at weather operations and resources by spending part of their three week visit in the base weather station.

ened by the inclusion of a course in geospace physics last

Resources of the meteorology laboratory include basic meteorological computer systems found in most

base weather stations. By using this equipment in an academic setting, cadets gain valuable experience that carries over into their selected career field.

Meteorology faculty and staff at the USAF Academy provide a comprehensive curriculum crafted to ensure graduates a thorough understanding of atmo-

spheric processes. Armed with a solid foundation in the mathematics and physics governing

atmospheric conditions, cadets improve their ability to visualize three dimensional processes and their influence on the evolution of weather. Because of this broader understanding, graduates enter operational duty eager to apply their understanding to a wide range of mission specific weather situations.

The majority of our meteorology graduates

go on to become aviators instead of weather officers. Almost 60 percent of commissioned graduates from the class of 1998 will attend flight training. USAFA will continue to send a large proportion of its graduates to undergraduate pilot training if the shortage of experienced pilots continues over the next several years. Whether these graduates pursue careers as pilots, navigators, maintenance officers, or weather officers, it is essential they understand how atmospheric phenomena effect the outcomes of military missions.

Graduates from our program in the '95, '96 and '97 year groups who entered weather career fields have transitioned well from academic to operational environments. Several graduates worked at base weather counters at Peterson AFB and the Academy Airfield while awaiting flight training. One graduate, destined for navigator training, was so energized by the experience that he requested and received a change to the weather career field.

Whether flying missions through inclement weather or forecasting it, you can expect Academy meteorology graduates to apply the meteorological and military training received at USAFA and make significant contributions in fulfilling your unit's mission.

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PURPLE HEART

TSgt. Gonzalez-Molina, Ramon OL-B, 18 WS, Ft. Eustis, VA

MERITORIOUS SERVICE MEDAL

Lt. Col. Robert D. LaFebre (2OLC), 46 WS Eglin AFB, FL

Maj. Patrick Hayes, 18 WS, Ft Bragg, NC CMSgt. Daniel J. Michalewicz, HQ AMC/DOW Scott AFB, IL

SMSgt. Jeffery B. Dunn -57 OSS/OSW, Nellis AFB, NV MSgt. Larry D. Jackson, HQ AMC/DOW, Scott AFB,

MSgt. William T. Shacklady, HQ AMC/DOW,

Scott AFB, IL

MSgt. Dennis Hern, Osan AB, Korea

MSgt. Jeffrey A. Cassidy, 154 WF Little Rock AFB, AR

MSgt. Troutt, 48 OSS/OSW RAF Lakenheath, England

MSgt. Cassidy, Jeffrey A., 154 WF Little Rock AFB, AR

MSgt. Michael W. Clark, 57th OSS/OSW,

Nellis AFB, NV

AIR FORCE COMMENDATION MEDAL

Maj. Jeffrey S. Tongue, 111 WF, Houston, TX Maj Lashbrook, Wesley S., 123 WF Portland OR

Capt. Kraetsch (2OLC), 48 OSS/OSW RAF

Lakenheath, England,

SMSgt. William Davis (IMA) - 57 OSS/OSW,

Nellis AFB, NV

MSgt. Compton, Richard Simmons Flt, 18 WS, Ft Bragg, NC

MSgt Russell, Mark D.123 WF Portland, OR

TSgt. Sidney D. Mallard, 57 OSS/OSW, Nellis AFB, NV

SSgt. Jones, Rodney D. OL-A, 1 WS, Ft Belvoir, VA

SSgt. Rouell, Lesley Dragon Flt, 18 WS, Ft Bragg, NC

SSgt. Wayne R. Hardesty - 57th OSS/OSW, Nellis AFB,

AIR FORCE ACHIEVEMENT MEDAL

1Lt. Lane, James C., 207 WF, Indianapolis, IN 1Lt. Brent A. Scott, 509 OSS/OSW, Whiteman AFB, MO

MSgt. Alfredo Dominguez III, 509 OSS/OSW, Whiteman AFB, MO

TSgt. Cope, Mark D., 207 WF Indianapolis, IN

TSgt. King, Patrick B., 207 WF Indianapolis, IN

TSgt. Shane Castle, 62 OSS/OSW, McChord AFB, WA

SSgt. Seth Trent, 509 OSS/OSW, Whiteman AFB, MO SSgt. Fitts, Christopher, 123 WF, Portland, OR

SSgt. Thomas, Brain Dragon Flt, 18 WS, Ft Bragg, NC SrA Angel L. Abdullah - 57th OSS/OSW, Nellis AFB,

SrA Patricha Ihle -57 OSS/OSW, Nellis AFB, NV SrA Danny Weiser, 9th OSW

A1C Gildner, Derrick Dragon Flt, 18 WS, Ft Bragg, NC

ARMY ACHIEVEMENT MEDAL

SSgt (S) Lesley Rouell, Dragon Flt, 18 WS, Ft Bragg,

SrA Gerry Q. Thompson, 509 OSS/OSW, Whiteman AFB, MO

JOINT SERVICE ACHIEVEMENT MEDAL

Capt. James A. Cotturone, Jr. HQ ACC/DIWP Capt. Kraetsch, 48 OSS/OSW RAF Lakenheath, England

NATIONAL GUARD ACHIEVEMENT MEDAL

SSgt. Anderson, Jason B., 156 WF Charlotte, NC SSgt. Jonget-jespursel, C., 156 WF Charlotte, NC

COMBAT READINESS MEDAL

Capt. Merritt, Roy OL-B, 18 WS, Ft Eustis, VA

GOOD CONDUCT MEDAL

SrA Jerrod Webb

ARMED FORCES EXPEDITIONARY MEDAI

Capt Muriel Ramirez Salas

NATO MEDAL

Capt Wimmer, Mark Dragon Flt, 18 WS, Ft Bragg, NC SSgt Rouell, Lesley Dragon Flt, 18 WS, Ft Bragg, NC SSgt Rodney Stovall

SrA Bowser, Erin Simmons Flt, 18 WS, Ft Bragg, NC SrA Lane, Corey Dragon Flt, 18 WS, Ft Bragg, NC SSgt Arlyne Rzepecki, 62 OSS/OSW McChord AFB, WA

LONG TOUR RIBBON

Capt. Kraetsch, 48 OSS/OSW RAF Lakenheath, England

AF LONGEVITY SERVICE AWARD

TSgt. McNamara, Valentina E., 146 WF Pittsburgh, PA

PROMOTIONS

TO LIEUTENANT COLONEL

Hayward, Jonathan AFCWC, Hurlburt Fld, FL Kolessar, Michael 140 WF Willow Grove, PA Lockhart, Mary(IMA) 57 OSS/OSW, Nellis AFB, NV Wallace, Robert E., 200 WF, Richmond, VA Wesley, Debra C., 200 WF, Richmond, VA

TO MAJOR

Holt, David W. 6WF, Ft Rucker, AL Lawrimore, Jay H. 156 WF, Charlotte, NC Rosenberg, Steven J., 140 WF, Willow Grove, PA

Salutes

Wilson, R. Dodge, Jr. 164 WF Rickenbacker ANGB, OH

TO FIRST LIEUTENANT

1Lt Wingenroth, James A., 125 WF Tulsa, OK

TO CHIEF MASTER SERGEANT

Zimmer, Michael AFCWC, Hurlburt Fld, FL

TO SENIOR MASTER SERGEANT

SMSgt Vann, Jess Jr., 125 WF Tulsa, OK

TO MASTER SERGEANT

Dennis Davis, Dennis AFCWC, Hurlburt Fld, FL Lindquist, Kenneth, 127 WF Forbes Fld, KS Simpkins, Robert M., 208 WF Minneapolis, MN

TO TECHNICAL SERGEANT

Carol Andersen AFCWC, Hurlburt Fld, FL Baird, William R., 140 WF, Willow Grove, PA Belton, Lamar R., 140 WF, Willow Grove, PA George Booker AFCWC, Hurlburt Fld, FL Roen, Nathan J., 208 WF, Minneapolis, MN

TO STAFF SERGEANT

Malseed, Robert E., 203 WF Ft Indiantown Gap, PA Meyls, Carrie A., 203 WF Ft Indiantown Gap, PA Rogers, Jason T., 181 WF Dallas, TX Davey L. Lewis, 57th OSS/OSW, Nellis AFB, NV Mathew R. Dearinger, 57th OSS/OSW, Nellis AFB, NV Steve Balli, Steve, 76th OSS/OSW, Kelly AFB, TX Susan W. Secora, 509 OSS/OSW, Whiteman AFB, MO

TO SENIOR AIRMAN

Anderson, Cheryl J., 159 WF, Camp Blanding, FL Brown, Tige D., 122 WF, Hammond, LA Colaio, Adam G., 204 WF, McGuire AFB, NJ Hoover, Kevin L., 111 WF, Houston, TX Sheedy, John T. 18 WS, Ft Bragg, NC Washington, Adrienne, 110 WF, St Louis, MO Alicia Moffatt, 46 WS Eglin AFB, FL

TO AIRMAN FIRST CLASS

Marks, Daniel S. 165 WF Louisville, KY William Reisner from 46 WS Eglin AFB, FL Douglas Grant, 46 WS Eglin AFB, FL

TO SENIOR AIRMAN

Rivers, Christy Simmons Flt, 18 WS, Ft Bragg, NC Thompson, Gerry Q. 509 OSS/OSW, Whiteman AFB, MO

Ward, Diane S. 509 OSS/OSW, Whiteman AFB, MO

TO AIRMAN FIRST CLASS

Childs, Laterese, OL-B, 18 WS, Ft Eustis, VA Jefferson, Joseph 76th OSS/OSW, Kelly AFB, TX Jennie Ravitch, 62 OSS/OSW, McChord AFB, WA Smith, Kristin A. 509 OSS/OSW, Whiteman AFB, MO

REENLISTMENTS

TSgt. Patrick Barcelona, 62 OSS/OSW, McChord AFB, WA

SSgt. Meyls, Carrie A., 203 WF, Ft. Indiantown Gap, PA SSgt. Rogers, Jason T., 181 WF, Dallas, TX SrA Lisa Blackwell, Simmons Flt, 18 WS, Ft Bragg, NC SrA Michael Lee, Simmons Flt, 18 WS, Ft Bragg, NC SrA Corey B. Lane, Dragon Flt, 18 WS, Ft Bragg, NC SrA James Albin, N., Jr., 203 WF, Ft. Indiantown Gap,

SrA Kimberly Smallwood, 120 WF, Buckley ANGB, CO A1C Daniel Marks, S., 165 WF, Louisville, KY

THOR

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Equal Opportunity

Equal opportunity for all officers who meet the board is essential. The evaluation of minority and female officers must clearly afford them fair and equitable consideration. Board members are particularly sensitive to the possibility that past individual and societal attitudes, and in some instances utilization policies or practices, may have placed these officers at a disadvantage from a total career perspective. Minority and female officers

have, as a group and individually, served the Air Force extremely well. Accordingly, it is expected that they will serve the Air Force well as Thor's Leaders.

Prohibition to Consider Marital Information

Consideration is not given to an officer's marital status, or the employment, educational, or volunteer service activities of an officer's spouse.

Character and Ethical Standards

Individual records are carefully reviewed to ensure standards, char-

acter, and integrity standards are met. Throughout the selection process, consideration is given to demonstrated professional competence and integrity. These qualities constitute the foundation from which the moral authority of command is derived. Absolute integrity of word, deed, and signature is a matter that permits no compromise. The individual officer bears great responsibility for establishing and observing scrupulous ethical standards, and must demonstrate the highest standards of morality and military professionalism.

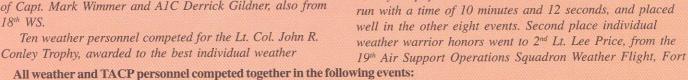
FORECASTERS WEATHER THE CHALLENGE

DRAGON CHALLENGE 98 competition was held Oct. 4-7 this year at Fort Drum, NY. DC is sponsored by USAF Air Combat Command's 18th Air Support Operations Group. The competition pits airmen in Combat Weather Teams and Tactical Air Control Parties from 19 geographically separated units throughout the eastern United States. Most of these airmen live and work on Army posts located hours away from the nearest Air Force base. They are volunteers, highly trained professionals, who provide special expertise in air power and weather services to their Army counterparts.

The purpose of DRAGON CHALLENGE is to test the skills, knowledge, physical conditioning, and combat readiness of Air Force personnel who are in direct support of combat units within the Army's XVIIIth Airborne Corps.

Weather warriors competed for both team and individual honors. CWTs competed for the Lt. Gen. Don Yates Trophy, awarded to the best overall weather team. The Yates Trophy was won by the team of Staff Sgt. Brian Thomas and AIC Everett Carson, from the 18th Weather Squadron, Fort Bragg, NC. Second place overall went to the weather team of Capt. Mark Wimmer and AIC Derrick Gildner, also from 18th WS.

Ten weather personnel competed for the Lt. Col. John R.



Land Navigation course 2-mile combat run with LBE, boots, kevlar helmet, and

weapon Obstacle Course

Marksmanship competition using M-16 rifle



SSgt. Brian Thomas, SrA Derrick Gildner, Capt. Mark Wimmer and AIC Tony Carson (not pictured), all 18th Weather Squadron members conduct the tactical navigation and communication portion of DRAGON CHALLENGE 98 competition at Fort Drum, NY.

competitor. Capt. Mark Wimmer, from 18th WS, won the

Conley Trophy. He bested all others in the 2-mile combat

- Self-Aid and Buddy Care proficiency exercise
- Map reading skills application
- Map symbology test
- Forecaster and Observer skills test (weather only)
- Forecasting and Observing evaluation (weather only)

Operation Remote Christmas

The 1999 DRAGON CHALLENGE is scheduled for Nov. 1-5 and will be hosted by the 19th ASOS at Fort Campbell, KY

AFWA-ites Warm Up to Fornotten llurma Holidau Gelebrations

The Global Mission of the Air Force means that its members necessarily spend a significant amount of time abroad. Although never opportune, members of Air Force Weather readily step forward when the tasking is received. Established in 1991 by squadron personnel, Operation Remote Christmas is a unit remembrance initiative. Its intention is to remind deployed airmen that they are not alone in responding to duty's call. Air Force Weather Agency members put together CARE PACK-AGES filled with home-baked holiday goodies and personal items to help lift the spirits of their deployed commrades. This holiday season pproximately 35 people are deployed around the globe in support of military

operations. A tradition like this couldn't maintain its success with-

out continued support. Special thanks to everyone who rolled up their sleeves, opened both their hearts and wallets in support of this year's Operation Remote Christmas. The men and women deployed will certainly feel better knowing that they are not forgotten.

Places where AFW members are deployed include Bosnia, Hungary, Camp Doha and Al Jaber (both in Kuwait),



Prince Sultan Air Base and Eskan Village (both in Saudi Arabia), Camps Eagle, Page, Red Cloud, Stanley and Stanton (all in Korea)