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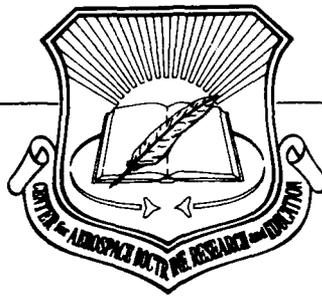
LT COL BILL D. BROGDON

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SUPPORT THE TROOPS!   PAYING OUR PEOPLE IN
HOSTILE FORWARD AREAS

Thank you for your assistance

Research Report No. AU-ARI-88-5

SUPPORT THE TROOPS!
PAYING OUR PEOPLE IN HOSTILE FORWARD AREAS

by

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To the thousands of men and women who,
despite every adversity imaginable, have made the
Air Force military pay system the best in the Department of
Defense. I hope the data from this report will aid in
further improving the tremendous support provided by
Air Force military pay personnel to our fellow warfighters who
deploy on a moment's notice to protect our
American way of life.

CONTENTS

FOREWORD

Most doctrinal research produced by the Air University Center for Aerospace Doctrine, Research, and Education (AUCADRE) involves warfighting as it relates to the employment of aerospace power. This document delves into an area of warfighting that is no less important: support to the troops.

Combat troops do not exist in a vacuum; without help and support from organizations, the effectiveness of combat forces will quickly decrease. I believe the ideas presented here will provide the financial support that combat troops need in order to be fully effective.

MARK J. WORRICK
Brigadier General, USAF
Commander
Air Force Accounting and
    Finance Center

ABOUT THE AUTHOR

Born in Dallas, Texas, Lt Col Bill Brogdon earned a BBA in accounting in 1967 and an MBA in finance in 1969, both from Southern Methodist University in Dallas, Texas. His initial assignment to Griffiss AFB, New York, was followed by an assignment to Vietnam. His subsequent service at Beale AFB, California, was followed by an assignment to the standardization and evaluation division of the Headquarters Air Force Audit Agency at Norton AFB, California. Selected for the Education with Industry Program in August 1979, he began a one-year tour with Montgomery Ward headquarters in Chicago. In July 1980 he went to the Pentagon as chief of the comptroller accounting and military compensation group. In July 1984 he became the deputy director of military pay operations at the Air Force Accounting and Finance Center (AFAFC) in Denver, Colorado. July 1987 took him to a dual assignment at Maxwell AFB, Alabama, as an Air War College student and a research fellow at the Air University Center for Aerospace Doctrine, Research, and Education. In July 1988 Colonel Brogdon became the comptroller of the Contract Management Division at Kirtland AFB, New Mexico. He and Leah have two children, Claire and Andy.

ACKNOWLEDGMENTS

CHAPTER 1

INTRODUCTION

The Air Force Accounting and Finance Center (AFAFC) and 1,400 people in military pay sections in the field pay over 800,000 Air Force active, guard, and reserve military personnel. They do their job very well during peacetime; but peacetime efficiency does not always equate to wartime effectiveness. The object of this study is to define the wartime military pay function, explain its evolution over time and through conflict, and propose effective, systematic means to meet the requirements for servicing troops in the future environment of conflict.

Essential to this study are several definitions. Military pay personnel are normally not involved in hand-to-hand combat or dodging bullets at the front lines. Rather, they operate immediately behind the front lines in an area I call the hostile forward area. Depending on the nature of the conflict, a hostile forward area might be supported from a local air base that existed prior to the beginning of the conflict. This would occur during a conflict where the Air Force has established facilities. The hostile forward area might also be supported from a bare-base deployment site constructed to support wartime requirements after the conflict began. This would occur where the Air Force does not have established facilities. The future military pay function described in this study is designed to support the latter: a bare-base deployment site.

The stark differences between the peacetime environment and this hostile forward area environment provide a basis of contrast that appears throughout the study. The peacetime environment is one of bureaucratic stability. The military pay function runs in a recurring routine. Personnel work a standard administrative workday, in comfortable offices, using an extensive computer network to service customers having standard entitlements and repetitive pay problems. When pay personnel need additional guidance, the comptroller chain of command is available.

In contrast, the hostile forward area environment is one of bureaucratic instability. Military pay personnel can plan only for the unexpected. Each day, indeed each hour, brings a new experience. Personnel will work long hours in a tent, with no computer support, servicing customers having a wide variety of entitlements and problems not seen in a peacetime environment. Moreover, pay personnel will be completely isolated from the chain of command.

These contrasts continually reinforce the need to modify the peacetime military pay system to provide for wartime needs. But this need to adjust to a wartime environment is not a recent phenomenon. History from World War II through the Vietnam War provides a long-term perspective of military pay problems and their solutions. The data have a remarkable consistency over a nearly 40-year time span; pay problems and their solutions do not change over time, but replay themselves in a never-ending cycle. What changes is the interplay of these problems with a vastly more complicated military institution. I have extrapolated from these problems to provide, conceptually and practically, a systemic answer to the military pay problems of the future that may inhibit the Air Force's warfighting capability.

In the last 40 years, the Air Force has transitioned from an element of the US Army--the Army Air Corps--to a service of its own. Likewise, the military pay function has changed. History traces its growth from a totally manual operation during World War II through the Korean War, the Pueblo crisis, and the Vietnam War to the almost totally computerized peacetime system of today. Yet it has not lost the human element. There are fewer people involved, but they are still there. The unprecedented level of service today is made possible by a unique merging of the human element and computers. However, computers have not yet been used in deployment exercises.

Thus, the issue becomes one of whether the highly technologized level of peacetime service can be transferred to a hostile forward area environment. Drawing from this historical perspective, the impact of technological innovation, and my own professional evaluation, I propose both long- and short-term views of systems designed to maintain that high level of peacetime service in the war zone.

The long-term view features a microchip-embedded plastic computer card that will replace the military identification card. It will include pay history and can be used with both accounting and finance office (AFO) computers and deployable troop support computers. These computers interface with the AFAFC pay data base via satellite, allowing the troops to determine the status of their pay and make their own changes. Nevertheless, a small cadre of AFO personnel will deploy to provide unique services where the troops need individual support.

But, technologically and financially, these vast changes are not immediately supportable; therefore, I will lay out a short-term system that provides an interim bridge toward an overall solution. The short-term system suggested here uses laptop computers that have internal disk files. It will provide approximately the same computer support that military pay personnel have become accustomed to. More important, the system provides the same level of support the troops have become accustomed to. The data files provide the current status of troops' pay and allow all changes to be made on the laptop computer for later transmittal to AFAFC. This short-term system provides immediate benefits to both the military pay personnel who run the system and the troops who see the results.

I have organized this study to provide a logical background for the recommendations to implement a hostile forward area military pay system. Chapter 2 acquaints the reader with the military pay system as it operates in today's peacetime environment; chapter 3 describes the hostile environment in which the current pay system must operate; chapter 4 provides the historical perspective of nearly 40 years of operating in hostile environments; chapter 5 provides suggestions for long-term and short-term hostile forward area pay systems; and chapter 6 presents the broader view of the major issues and discusses the steps necessary to implement the systems. The Air Force has both an obligation and an opportunity to demonstrate that it can maintain its high level of military pay service at any time and at any location. You either fly and fight or support the troops who do; this study aims to do the latter.

NOTES

Chapter 1

1.   Erwin Wybenga, chief of the Evaluation and Analysis
Division,   Directorate of Military Pay Operations, Air Force
Accounting and Finance Center, telephone interview with
author, 17 November 1987.

CHAPTER 2

THE PEACETIME ENVIRONMENT

There is a need to understand the current military pay environment prior to studying the wartime environment because the two stand in such contrast. The peacetime environment is one of stability, the wartime environment is one of instability. With a firm understanding of the peacetime environment, one can readily acknowledge the challenges of the wartime environment.

The military pay section is one of eight accounting and finance office sections that report to the accounting and finance officer, who reports to the base comptroller. Due to the pay section's dependency on computers, pay personnel normally work in a temperature-controlled building. Dust is minimal and the humidity is as well controlled as any other administrative building. Personnel work the usual administrative duty day, with small amounts of occasional overtime near payday. Usually, some of the personnel are in a training mode; and a fair number are new to either the Air Force or the pay function. However, most of the day-to-day details of the pay system have been computerized to the point that a minimally knowledgeable individual can operate the system and satisfy customers' needs.

When base personnel have a question about their pay account, they need only stop by the military pay section where their pay account can be displayed on a computer terminal. Included in the display will be 12 months of pay history and a projection of the amount they will be paid on the next payday. In the case of 94 percent of Air Force personnel, the pay due will automatically be transferred to each member's bank account on or slightly before payday. Each member is notified of the midmonth deposit amount via a net pay advice mailed from the base pay section. At the end of the month, a leave and earnings statement is mailed. The statement details pay account activity that month and confirms that requested allotments were sent to the member's mortgage company or almost any other location the member desires. It also confirms that savings bond deductions were made and that leave was properly posted. In short, Air Force members have instant and continual access to their pay accounts.

This instant access is maintained through a worldwide network of mainframe computers, microcomputers, and minicomputers tied together via nearly every communications link possible from landlines to satellite. These

communications links provide virtually worldwide access during most base duty hours to the pay account data base at the Air Force Accounting and Finance Center in Denver, Colorado.

Most base peacetime missions are relatively stable and centered around daylight hours. Because nearly all potential military pay customers work a schedule that includes a portion of the base administrative duty day, there is no need for a customer service function at other than the normal office working hours. Pay section customers are fairly consistent. The nature of the base mission does not fluctuate, and neither do the pay entitlements or the pay problems. Pay entitlements can be verified when the member arrives at the base, and they can be depended on to remain essentially the same until he or she departs. With the exception of a base with a large transient population, the entitlements pertaining to a base or to the individuals assigned there are well known to personnel in the pay section. Consequently, only casual references to regulations are necessary to service the base population.

The peacetime environment poses a sufficient number of challenges to the accounting and finance community to keep the planners and systems accountants occupied for years to come. However, the question here is how to ensure that the ever-evolving conglomerate of systems known as the Air Force military pay system can go to war when necessary. Chapter 3 discusses military pay experiences in a contemporary wartime environment.

CHAPTER 3

THE HOSTILE ENVIRONMENT

The environment established by a deployment to a hostile forward area stands in stark contrast to the peacetime environment. The central advantage of a peacetime environment is stability. The central disadvantage of a hostile forward area environment is instability. In peacetime, there is likely to be little change over the short term. Changes are usually evolutionary, allowing significant time for planning. However, deploying to a hostile forward area requires a large number of changes--all in the same time frame, and all unlike anything military pay personnel are likely to have seen before. This chapter explores those differences and how they affect the military pay mission.

The Situational Environment

Individual wing missions do not change substantially when the wing is transferred to a hostile forward area environment. Sortie rates do increase, but that does not directly affect the pay section. What will affect the pay section is the complexity of supporting the wide diversity of troops present in a hostile forward area. For example, there may be units from many different wings assigned to each location. The recent increased emphasis on joint operations may lead to joint beddowns--not uncommon during exercises. Also not unusual in exercises is for one service to be given combat support functions to perform for all services, even when the beddowns are not technically "joint" but only adjacent to each other.

Rather than dealing with the typical Tactical Air Command wing, pay personnel will be dealing with varied and unfamiliar entitlements from all services earned by fighter pilots, search and rescue helicopter personnel, counterinsurgency teams, and units with which they are not familiar. Further, the locations of these troops and/or their missions may be classified. To further complicate the situation, military entitlement rules are not administered entirely the same way from service to service. (In fact, there have been numerous arguments just within the Air Force between the Air Force Accounting and Finance Center and the major commands.) All of these factors combine to make a military pay technician uncomfortable, unsettled, and mentally fatigued.

Adding to the mental fatigue will be the increased working hours. Military pay section working hours will not conform to the typical eight-hour administrative workday. During the early days of the deployment, and any time the site is moved, all accounting and finance office (AFO) personnel will be tasked by the combat support commander (somewhat equivalent to a base commander, but see the later discussion on chain of command) to help set up the facilities. Depending on the operational situation, the facilities will vary from tents to transportable buildings.

Regardless of the type of facilities, setting them up will take all available time until the site is operational. However, unlike many site missions, the subject of military pay is of too immediate a nature to put on hold until pay personnel are back in the office to answer questions. Consequently, a dilemma arises: Should pay personnel ask the combat support commander to be excused from set-up duty to keep the office open? (This question is unlikely to be asked or approved unless it is payday. The dilemma will be resolved by pay personnel answering a barrage of questions during breaks, lunch hours, and "sleep time," further adding to their fatigue.)

Once the site is established and the operation becomes active, the flying schedule will drive the schedule for flying support activities such as aircraft maintenance; and in large part it will determine the entire combat support schedule. Although sorties may be flown throughout the 24-hour day, they have tended to cluster around early morning and evening exercises. Some support activities will probably assume a schedule of two 12-hour shifts, seven days a week. Some people will either be asleep or too involved in generating sorties to be able to visit the military pay section during a peacetime schedule. Although military pay personnel have experimented with various schedules during exercises, including a compromise schedule of 1400 to 2200, they have eventually established a 24-hour schedule. Not manned for this demanding schedule, the military pay section has been able to maintain it during exercises due primarily to the short length of time rotating military pay personnel have had to spend actually on the schedule. During a deployment to a hostile forward area, this type of schedule will strain the capacity of pay section manning, which is not currently programmed for this level of service. Physical fatigue now joins mental fatigue.

Military pay personnel will also be assuming duties they may never have performed or been trained for in an environment that will neither allow time for on-the-job training (OJT) nor tolerate a "can you come back a little

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later" response to a customer. Depending on the size of the deployment and the extent to which the AFO is staffed, military pay personnel are also going to be tasked to perform a number of AFO functions other than military pay. Schedules of 24 hours a day and seven days a week will not always allow the specialization prevalent in a peacetime AFO. Pay personnel in past exercises have been pressed into performing budget, contracting, and cashier duties. Each of these specialties is sensitive for different reasons; but the fact remains that a military pay technician without additional OJT or background in these areas is going to be hard pressed to deal with unfamiliar problems and forms and still provide proper service to the customer. (A side issue to this problem concerns internal controls. With the same technician initiating the transaction and disbursing the funds, fatigue-caused mistakes are more likely to go unnoticed.)

Today's peacetime military pay technician works in a world of almost instant communication. Using a computer terminal connected to the military pay data base at AFAFC, the pay technician can view any requested pay account almost instantaneously. If there is a question, there are many military pay technicians in the AFO to provide assistance; and the major command and the AFAFC are but a telephone call away.

Not so for a deployed unit. Adding to the technicians' problems will be the almost total isolation in which they will work. There is no provision for a tie to the AFAFC data base; therefore, the technician has no more data on the status of the pay account than does the customer. Current satellites will provide telephone circuits from the deployment site to almost any location; but the priority for their use will probably make them available only in the command post, difficult to reserve, and generally unavailable for the extended conversations needed to discuss pay account problems.

The only other avenue of communication is an electrical message (TWX). These will have to compete with operational information also, but they will eventually be transmitted. Using an expedited handling system at AFAFC, the technician would in most cases receive one-day turnaround service. Allowing for communication transmittal times, this would result in about a one-week turnaround time from question to answer at the deployment site.

Another factor in the sense of isolation will be the difference in the chain of command between a deployment site and the usual air base. On a peacetime base, the military

pay section works for an accounting and finance officer who works for a comptroller who works for a deputy commander for resource management who works for the wing commander. At a deployment site, the agent (usually a midrange NCO who "is the military pay section") works directly for the combat support commander who runs all nonoperational elements at the site. Thus, three officers who usually supply all of the policy and a good deal of the technical guidance are no longer in the chain. The combat support commander can be expected to know little if anything about accounting and finance policies or public laws; and even if he did, he would be entirely too busy to offer anything other than broad policy direction.

Another factor will involve the theater commander. In all operational deployments, a theater commander is appointed to "run" the war and act as senior commander over the service components in the theater. It is generally assumed that the commander will be an Army officer, but he could be from any service. Among the many duties of his staff, if they so choose, will be to standardize such theater military pay policies as frequency and amount of pay to be disbursed to the troops. These policies might be totally divergent from current Air Force policies and, more important, incompatible with Air Force military pay systems.

The Customer

The customers in a hostile forward area do not resemble the homogeneous group present on a peacetime base. They will qualify for many different nonpeacetime entitlements. These entitlements may be authorized by month-to-month documentation that requires considerable work. It is unlikely that the customers will have any sort of pay documents even though they will have been encouraged to take a copy of their leave and earnings statement (LES) with them. It is also unlikely that they will receive a current LES for at least the first month or so. In essence, an uninformed pay section will be forced to deal with the problems of an uninformed customer.

The scarcity of information concerning troops' pay, the records of which both the pay section and individuals have easy access during peacetime, will cause what little information is available to become more important. The dramatic improvements in peacetime military pay service in the last 30 years have raised the level of service to a point that will be difficult to match in a hostile forward area. The troops have become accustomed to the same instant information from the data base at AFAFC that the pay

technicians have grown to rely on. This raises the issue of what is an acceptable level of service, a term that has never been defined.

The two most asked questions during past exercises have been "How much did I get paid?" and "Did my check make it to the bank?" The most offered answer to both questions has been "I don't know." Those examples serve as a unique introduction to the effect of the hostile forward area environment on the military paycheck and to the fact that deployed individuals are likely to be more than normally concerned about their pay.

The amount of pay is of more than usual concern to the troops since the deployment may change their military pay entitlements and therefore the amount of their checks. For example, the basic allowance for subsistence could cease, depending on whether the deployment is defined as "field conditions"; or the deployment could cause additional entitlements such as imminent danger pay.

Concern for receipt of a paycheck will range from no concern at all for individuals who participate in the direct deposit program (DDP), formerly known as the SUREPAY program, to deep concern for those who do not. For individuals who participate in the DDP, deployment does not affect their pay. Their checks will continue flowing to the designated financial organization until AFAFC is instructed otherwise. If the receiving financial organization account is a joint account with another party (which need not be a spouse or dependent), that party continues to have access to that account.

During exercises and actual deployments, paychecks for individuals who have no dependents and who normally receive their locally issued check at home or in their mailbox will be stopped (to preclude any possibility of theft or loss while the individuals are gone). This procedure allows the individuals to draw casual payments easily at the deployment site without the AFO worry of double payment since the pay is accumulating in the individual's pay account without any paychecks being drawn against it. (A casual pay is a payment made to an individual not permanently stationed at that location.) However, individuals have been encouraged to start the DDP during exercise deployments as a way of ensuring that they continue to be paid in more or less the usual way. These customers are naturally concerned whether their check made it to the bank because it is the first of their checks to be rerouted to the bank. Individuals have the same concern after changing banks.

During an exercise, individuals with dependents are offered an option: either start the DDP or continue to receive their checks in their mailboxes. If they elect to continue receiving their checks, they are advised that their dependents may have trouble cashing them. (In fact, cashing the checks is illegal without a power of attorney; but they can be deposited to a joint bank account.) Further, troops who elect to continue receiving their checks have the same concerns as those who elect DDP since neither are receiving their checks directly. In addition, they know that their dependents are depending on those checks.

For a real deployment, however, all local paychecks will be stopped. Troops may either (1) start the DDP, (2) establish an allotment for their dependents, or (3) attempt to draw enough casual payments to mail cash back to their dependents. The second option will generate a significant one-time work load at either the departure site or the deployment site; the third option will cause significant work load at the deployment site. The combat support commander might have to limit the number and dollar amount of casual pays, as has on occasion happened during exercises. This will cause considerable ill will toward the military pay section, and it may cause financial hardship on the troops or their dependents. It will undoubtedly affect work at the deployment site.

Requests for casual payments will be a significant portion of the work load for the military pay section. The amounts disbursed, and therefore the amount of cash needed, will be driven in large part by whether troops will be allowed off the site. In Vietnam, for example, Da Nang AB was "closed"; that is, troops stationed there were not allowed off the base. However, Tan Son Nhut AB was usually "open" and troops could visit Saigon whenever they wished. Whether the site will be open or closed will probably be unknown for some amount of time after the site is established. If troops are not allowed off the site, the money will essentially recycle with little need for additional funds except for that portion flowing home to dependents by mail. (This recycling phenomenon is observed on US Navy ships between port calls.) If troops are allowed off the site, casual pays will be numerous for those troops not on the DDP. The AFO may also be the only location on the site that is able to cash checks, thus adding to the already strained work load.

If troops have brought their LES with them, pay personnel will be able to authorize casual pays; without the LES, pay personnel will have no knowledge of whether troops are receiving full pay through the DDP or even how much

their net pay is. Those who draw full pay via the DDP should be cashing checks rather than drawing casual pay. Having no computer terminal, the pay section will have to rely on some type of computer-generated listing (probably out of date by the time it finally arrives) or on manual records to determine how much pay the troops have drawn.

One of the problems with fulfilling pay function needs is locating a source of cash. US embassies can furnish small dollar amounts if they are nearby and operational; but they cannot furnish enough to supply a deployment site. In most situations, the cash will have to be brought in with the deployment; and transporting large dollar amounts is best done on military aircraft.

Complicating the cash situation will be the need for local (foreign) currency. US embassies may again be the best source. If the site is closed, only enough local currency to satisfy procurement needs will be required and this would not directly involve the pay section. If the site is open, however, troops may want to draw casual pay in local currency. Since the military pay records will always be maintained in dollars, this will involve paying the troops in dollars and then allowing them to exchange a portion of those dollars for local currency--in effect, doubling the work load.

Safeguarding large dollar amounts and local currency has proven to be a problem in past exercises. It will undoubtedly prove to be a problem in future deployments as well. Security police are normally charged with providing security for funds; but in past exercises, they have either been occupied elsewhere and unavailable or the agent has arrived before the security police got there. The possibility of arming the agent has surfaced but has been disapproved. It is unlikely that the agent would be firearm-qualified--and besides, it is the function of security police to safeguard funds. Although part of the deployment equipment is a safe that would take four or five large individuals to lift, the funds are still at risk. The problem will have to be solved in a more permanent manner than the agents taking the cash to bed with them, as has been done in the past.

The Physical Environment

The physical environment to be faced in a hostile forward area has not been previously defined within the pay community. The Air Force has proven its ability to deploy to and operate from virtually any site in the world. However, rather than speculate on future deployment sites, I have chosen to concentrate on a location to which the Air Force consistently deploys and which contains one of the harshest environments: the Persian Gulf.

A concept called Harvest Eagle was originally developed to allow the Air Force to deploy to any "bare-base" location, establish a deployment site, and operate from it. (A bare base is an area in which no facilities are available to the Air Force.) Harvest Eagle assets include an air-conditioned building, tables, and chairs for the AFO. Generators are available to furnish CONUS-equivalent power. If these assets were to be used in a deployment, the interior office environment would approximate that of a CONUS base. But Harvest Eagle assets may not be available for all deployment sites; and during exercises such as Bright Star these assets have not been used. It is probably safest to assume the use of tents or buildings that are not climatically controlled.

Without the Harvest Eagle assets, the military pay technician's most powerful tool--the computer--is eliminated. Previous comments have been directed toward computer terminals tied to the AFAFC data base, but pay personnel also use stand-alone minicomputers to eliminate some of the paperwork and to electronically construct computer data for transmittal to the AFAFC. However, attempts to use the minicomputers in the Persian Gulf area without air-conditioned buildings have been unsuccessful-- the computers quickly overheated. Summer air temperatures range from a low of 77 degrees to a high of 131 degrees.[1] And even without the problem of overheating, the practically continuous desert winds always carry fine sand particles that find their way into every crevice.[2] These conditions exceed the tolerances of the standard 5-1/4-inch computer floppy disk as well as the computer itself.

Another problem has been electrical power. Local power in the Persian Gulf area has not been suitable, leaving sites to operate with generator power. Because of the overheating problem, no attempts have been made to use the minicomputers for other than short periods of time. But the generators have only been able to supply power for limited periods of time and should not be considered reliable for consistent operation of computers.

Of the many adjustments the military pay technician will be forced to undergo upon deployment, the most serious will be this loss of computer support. The Air Force military pay system has gradually become so centralized that pay technicians have either forgotten how to process paperwork without the computer or have never been trained to do so. They have become reluctant to use other than the standard computer system.

During the last several years, there have been occasions where a base-level AFO computer has failed. This is the computer that supports the automated production of pay transactions and transmits them to the AFAFC over a dedicated communications circuit. There is a well-known backup that uses manually created transactions and standard electronic data circuits to transmit them to AFAFC. But in every case, the AFOs elected to hold all processing until the computer was repaired rather than use the more manual system. Pay technicians have simply grown too dependent on their computers to revert voluntarily to a manual process.

Conclusions

We have learned eight things in our analysis of the hostile forward area environment.

1. Military pay personnel will face unfamiliar entitlements at the deployment site. They will not be prepared to process them without research and possibly not without consultation with their major command or AFAFC.

2. Extended working hours, additional jobs to perform, and unfamiliar entitlement rules will cause mental and physical fatigue, which could lead to decreased quality.

3. Necessary restrictions on deployment site services, such as easy customer access to both pay information and funds (either partial or casual pay in the AFO, or check cashing elsewhere), will result in customers' feeling they are not receiving appropriate service.

4. The lack of computer connection with AFAFC and the lack of instantaneous communications with the chain of command will cause a sense of isolation in the military pay section.

5. The lack of easy access to their pay information will cause troops to feel insecure in financial matters. It may also affect the quality of their work and generate increased customer traffic in the military pay section.

6. A deployment could generate a large number of transactions (such as DDP starts) that will have to be processed very quickly to avoid causing significant financial problems; and at deployment sites, such problems cannot be worked easily or expeditiously.

7. A considerable portion of the military pay section work load will consist of partial and casual payments.

8. Current stand-alone military pay minicomputers and their floppy disks will not operate in extreme environments such as the Persian Gulf without climate and dust control.

NOTES

Chapter 3

1. A. M. Kao and P. F. Hadala, <u>Theater of Operation Construction in the Desert: Handbook of Lessons Learned in the Middle East</u>, Technical Report CERL TR-M-287 (Champaign, Ill.: US Army Construction Engineering Research Laboratory, January 1981), 2-1.

2. Ibid., 2-2.

CHAPTER 4

A HISTORY OF MILITARY PAY SERVICE

Those who cannot remember the past are condemned
to repeat it.

George Santayana

This chapter deals with pay problems and, more
important, solutions to those problems. The purpose of this
review is to pull out the pieces of history that relate to
military pay support in hostile forward areas and apply them
to present-day problems in order to solve those problems in
the future. Not only do pay problems predate the Air Force,
they have not changed much. As you progress from World War
II you begin to see a rather consistent pattern. Many of
the themes are not surprising: a lack of planning, attempts
to superimpose the peacetime way of doing things onto a
wartime situation, and a bureaucracy unfamiliar with the
needs of the member in the field. Despite the roadblocks
thrown in their way, however, pay personnel in the field
consistently ensured that each member was paid the proper
amount.

World War II (1941-45)

Military pay support for the Army Air Forces in World
War II was provided by the Army finance system. Flight pay
was simply another Army entitlement.[1] Until 1944 enlisted
personnel and officers, whether Army or Army Air Forces,
were paid once a month. But two different systems were
used. The most notable difference involved the pay voucher:
enlisted personnel could be grouped together on one voucher;
officers were listed separately, one to a voucher.[2]

Enlisted Pay

The World War II pay system had many variants that were
used at different times and locations. Two enlisted pay
systems eventually evolved. The first was the peacetime
system directly transferred to the wartime environment; the
second was what the first might have been if it had been
planned for a combat environment.

In the first system, personnel sections typed unit pay
vouchers between the 10th and 15th of the month and sent
them to the units for a signature by each individual listed.

The signature evidenced the existence of the individual, who could draw all pay due or a lower amount. After all signatures were collected, the vouchers were returned to finance where the payrolls were actually computed--first in dollars, then in local currency.[3] No payments were made by check and none were made in dollars unless the individual was exiting the theater. In essence, all payrolls were computed twice. Vouchers and currency were sealed by unit in a payroll bag.

Working with unfamiliar foreign currency made it more difficult than usual to determine how many bills of what denominations were necessary to ensure proper change when payment was made. As is often the case, personnel in the field had to devise their own procedures. One office reported computing the necessary number of 2-, 10-, and 100-franc notes by multiplying the number of payees by two. It then computed the number of 5- and 50-franc notes by dividing the number of payees by two. The number of 500-franc notes was then determined by subtracting the total amount of the other notes from the total amount of the payroll and dividing the difference by 500![4]

By the time payroll was computed and conversions made, it was usually the end of the month. Agents from each unit, appointed by the finance office, would come to the finance office, pick up the bag, and set out to locate each member of the unit, who would again sign for the money. Agents had no standard time limit within which to complete payroll distribution. A member could take either the stated amount or nothing. In a widely dispersed unit, such as one of forward observers, it might take a week or more. In a flying squadron it was easier to locate each member. If the agent could not locate an individual or if the individual did not want to be paid, the agent redlined the name off the voucher. Both voucher and unpaid currency were returned to the finance office.

This pay system probably worked well in a peacetime environment; but in a combat zone, it was just too time-consuming. Consequently, it was modified in the field. (The modifications actually increased the work load in the finance office, but that was considered acceptable because it reduced the time required of customers.) Vouchers were no longer sent to units for signatures prior to payday. The finance office computed and converted members' pay, whether or not they could be located or wanted the full amount, and placed the full amount in the bag for the agent, thereby eliminating the need to locate each member at midmonth.[5] This change eliminated "hassle" in the field, but it also eliminated the option of taking less pay. Although no

records are available to indicate whether this was a heavily used option, the taking of less than full pay due became a subject of considerable discussion within Army finance circles. It is covered separately in the "How Much to Disburse" section later in this chapter.

The finance offices also made another change--one that reduced the amount of time required to distribute pay to members. They encouraged the unit agent to split the distribution chore with subagents, eliminating the need for one agent to travel large distances in various directions. The unit agent collected the money from the finance office, broke it into smaller groups for the subagents, and returned the payroll signatures to the finance office. While the single agent system worked in the United States, overseas agents had to "chase around all over the countryside looking for their men when they should have been free to command them in the field. That the job got done over there was a credit to the men running the system, not to the system itself. . . . They were hard working men who simply made the inadequate system work."[6]

Another feature unique to enlisted personnel pay was the soldier's individual pay record (SIPR). The SIPR, issued upon enlistment, contained name, serial number, grade, years of service, insurance premium and other allotments, pay grade, individual to be notified in case of emergency, and the date the SIPR was created. This document proved to be extremely useful when individuals were away from their unit. Besides serving as a means of identification, it provided all the information necessary to pay an individual who had missed payday.[7] (Casual payments were handled similarly and are discussed later.)

Officer Pay

Finance offices had many more problems with officer pay than with enlisted pay. The most significant difference between enlisted pay and officer pay was the voucher; that is, enlisted members could be grouped together on one voucher while each officer was listed on a separate voucher.[8] As you might expect, the single voucher procedure with its large volume of paper did not survive in combat. In 1944 the field finally overcame the bureaucracy and converted officers to the same group voucher procedure used for enlisted personnel pay.[9] This resulted in considerable time and energy savings for the finance offices and for the officers themselves (they prepared their own pay vouchers).[10]

During World War II, the Army replaced individual soldiers rather than battalions or other units. This system necessitated large reception centers to support arriving personnel until they were assigned to a unit. To avoid a situation in which large numbers of personnel unfamiliar with theater military pay policies continually besieged the finance office, the reception centers established finance liaison offices from their own manning to answer questions and process the various pay documents. The liaison offices summarized monetary transactions and other documents so the finance offices could post them as one transaction and eliminate considerable paperwork. The system also provided faster service to both permanent party personnel (who used the finance office) and temporarily assigned personnel (who used the reception center).[11]

Unlike enlisted personnel, officers were paid by check (drawn on local currency). Although one might assume this procedure would strain local check-cashing facilities such as the post exchanges, there are no comments in the archives to that effect. Rather, one report related that when the AFO was unable to keep up with the checkwriting work load in Manila, lieutenant colonels and below were paid in cash while colonels and generals continued to receive checks.[12] Continuing to issue checks for the senior officers would seem to indicate that the receipt of a check was considered a "perk" rather than an inconvenience.

How Much to Disburse

One important question remained unanswered at the end of the war: Should troops on the front line be paid in full or in some lower amount? The question generated considerable discussion at all levels until it was finally given a bureaucratic burial at the War Department.

Several schools of thought arose concerning this issue as it made its way from the field to the War Department. The finance officer for the Eighth Armored Division reported the typical troop attitude: "What . . . do I want with money in a foxhole?" Most soldiers wanted the majority of their pay sent home, keeping just enough to visit the exchange occasionally.[13] The chief of the currency section at Supreme Headquarters, Allied Expeditionary Forces, believed that frontline troops, both enlisted personnel and officers, should be given full credit but paid only limited sums. He saw this as a solution to the inflation and currency speculation problems that resulted from the relatively large sums spent by US troops within comparatively small and normally self-contained economies.[14]

The other side of the argument was that the troops had earned their pay and deserved it if they wanted it. The financial adviser to the Mediterranean theater believed that "neither the troops themselves nor American public opinion would tolerate a pay-withholding system which limited troop pay-withdrawals for local expenditures";[15] and the Army judge advocate general ruled that any limitation of pay to the troops would violate the law.[16] The Army refused to discuss the issue with Congress.[17] Finally, the director of budget and the War Department's chief of civil affairs declared that any limitation "would be contrary to the ingrained rule that a soldier's pay is inviolate and that he can spend it as he considers best."[18] However, to reduce the impact of excessive cash, and to finance the war effort, the Army pushed the sale of war bonds through the allotment system.[19]

Operational-Level Support

One of the largest problems to fall out of unrealistic preplanning was the decision to provide finance support only at division level or higher.[20] The centralization and resultant high volume produced an efficient work flow within the finance office operation, but the pay and document distribution system could not handle the distances between the finance office and the customers. The troops were simply too spread out to be able to interact with the finance office. In the Aleutian Islands, some of the units went unpaid for as long as six months;[21] in Hawaii, four months;[22] and in Morocco, three months.[23] The situation had risen to chief of staff level by August 1943, when Gen George C. Marshall notified field commanders that large numbers of enlisted men were returning to the United States without having been paid for months and that special attention should be given to correcting the problem.[24]

A subsidiary problem was how to support finance personnel when they traveled into the field to remedy the no-payment problem. No office equipment was available, nor was there a place to put it if they had had it. And as one finance officer put it, "You just don't put a man under a palm tree to figure a payroll."[25] That finance personnel maintained service under such conditions is remarkable. One office operating in North Africa found that wind and sand played havoc with documents laid out to begin disbursing. The same North African office reported operating in Casablanca in the morning and Rabat, approximately 100 miles away, that afternoon.[26] In the Philippines after the MacArthur campaign, the finance office reported that the men were so widely scattered they had to use a light airplane

just to travel to the front lines to make payments. And even when at "home base," the finance office did its work without buildings, office equipment, or electric lights.[27]

Hospitalized Personnel

Regulations specified that patients were not to be released or moved unless their pay accounts were current. No allowances were made for seriously injured patients who might have lost their SIPR during enemy action or for patients who did not want to be paid. One hospital, in Tacloban, Leyte, challenged the system and won because the hospital commander pressed the issue. Their rules were a bit more customer-oriented. There, patients with SIPRs were paid any amount they desired up to full pay due. Patients with no SIPRs received partial payments (amount unknown). If they were to remain in the hospital more than one week, a new pay record was established so they could receive full payments. Patients too ill to manage their affairs were not paid at all. And finally, those patients returning to the United States were given automatic payments of $15 for en route expenses. The patients were reported to be well pleased even if headquarters was not.[28]

Partial and Casual Payments

As Clausewitz notes, the fog and friction of war frequently cause carefully laid plans to go astray. Partial and casual payments were designed to ensure that when things do go astray and the troops have not been paid as scheduled or need additional funds, they can be paid other than on the scheduled payday. The only difference between partial and casual payments is a technical one. If the AFO has the pay records for the troops requesting payments, they are called partial payments. If the pay records are maintained elsewhere, the payments are called casual payments. Regardless of the name, there was a definite need for such payments.

When US troops first arrived overseas, they were often paid some amount--more to boost morale than to serve a monetary need. When new fliers arrived in the United Kingdom, for example, the commander of the US Army Air Forces there wanted them to get some English money immediately; and the finance office paid them even though there were no vouchers or pay records.[29]

This action was consistent with European theater regulations. Recall that officers were paid on the basis of vouchers they prepared, subject to review by the finance office prior to payment. Many of the partial and casual payments were to newly arrived officers coming from either the United States or other theaters, however, and substantiating documents were not available for them. Thousands arrived without travel orders, statements of service, or flying orders to support flying pay. European finance offices were therefore authorized to make payments based on previous payments.[30]

Originally, partial and casual payments were designed to alleviate suffering. Finance offices therefore assumed that members applying for such payments had a legitimate need. Such was not necessarily the case, however, and this became a difficult problem.

Abuses ranged from small-time greed to outright fraud. The most serious offenders were fliers who traveled to several different installations. They would appear at each finance office, draw a payment, and, apparently, assume they would never be discovered.[31] A similar situation arose with field-ration messes. Officers drew basic allowance for subsistence; when they ate in a field-ration mess, they were to pay for their meals. In some cases, however, they merely signed for their food and did not pay. This signature was supposed to eventually wind its way back to the finance office for payroll deduction. But the only way to manage these types of transactions is to centralize the data--a difficult undertaking. It was tried in the Mediterranean theater, however, and was successful in uncovering fraudulent requests.[32]

The largest number of partial and casual payments were made in connection with the large replacement depots through which battle returnees, CONUS replacements, and transferees processed. Many of the troops were three to eight months behind in pay and were there only a day or so. Regulations required that each member sign a payroll sheet. Payment was to be made in local currency; frequently, however, the troop had moved on by the time the process was completed. The depots solved this problem by eliminating the signature step between the personnel office and the finance office. In essence, they computed a payroll for everyone on the personnel list, which took more time. But because the pay agent could pay anyone he could locate, the process was considerably faster--and more men actually got paid.[33]

Korean War (1950-53)

After the Air Force was formed as a separate service, the finance mission shifted from Army finance offices to Air Force accounting and finance offices (AFOs). In the years following World War II, improvements in pay procedures were implemented. Enlisted personnel and officers were paid the same way. There were no separate vouchers for officers, and all personnel were paid by check. The cardboard pay record was still used, but an addressograph plate was used to stamp names on the payroll. Computation was still a manual process, however, and it was still manually entered on the pay record.

AFO Locations within the Theater

When the Korean War began, the Air Force already had two AFOs in Korea. One was located at Osan AB and the other at Kimpo Airfield near Seoul, the capital. (There were other comptroller personnel at forward locations in Korea, but most were working on the budget.) They remained the only two offices even after Air Force manning increased to approximately 100,000 by the end of the war.[34]

The incoming Air Force units were bedded down throughout South Korea, including many forward operating locations. Most of the units were on TDY to Korea rather than being permanently deployed, so the Air Force elected to service them on a TDY basis. Pay records were maintained at a variety of locations, including in-country, Japan, or worldwide locations from which the members were TDY.

Payment Support

Air Force members assigned to either of the only two in-country locations that had an AFO were paid by check, just as was any other Air Force member worldwide. There were no unusual requirements, and few problems, at these and other bases; forward operating locations were the real war zone.

In order to ensure that Air Force members at the forward operating locations were properly paid, in-country AFO personnel packed receipts, payroll lists, and cash (actually military payment certificates--MPC) into a bag and set out to make casual or partial payments to any Air Force members who wished to receive them. When they ran out of money, they returned to start the process over again.

There were a few communication problems and coordination delays at Osan and Kimpo, of course: At the same time members were receiving cash from the TDY AFO, they were being mailed a check from the AFO that maintained their pay records. Such complications constituted the heart of the major problem during the war.

When the TDY AFO made payments to members, it would ask the members where their pay records were kept. Surprisingly enough, they usually knew. When they did not know, or when the necessary information was somehow not recorded on the pay documents, AFO personnel had to telephone other AFOs in the Pacific area, or perhaps in CONUS, to locate the AFO with the pay records. (Even this effort was easier than attempting to locate each member again.) The AFO then had to send a pay document to the pay record AFO so it could subtract the payment from pay due the next payday. The document never made it to the pay record location in time to be subtracted from the correct pay period, however; for example, it took approximately two weeks for the document to travel from Korea to Japan, excluding any processing time at either end. As a result, the member would be overpaid one payday and, when the casual or partial payment was posted, possibly receive no pay at all the next. This cycle was incomprehensible to the average troop fighting the war.

USS Pueblo Incident (1968)

The USS Pueblo was captured by North Koreans on 23 January 1968 while in international waters off the coast of North Korea. On 25 January 1968 the president issued an executive order to call certain Reserve and National Guard units to active duty because of the Pueblo incident. Eight Air Force Reserve and 14 Air National Guard units, consisting of 14,600 personnel, were ordered to report by midnight 26 January 1968.[35] This was an interesting incident from the military pay point of view.

Background

Since the Korean War, the pay system had advanced from a totally manual process to a system called accrued military pay system (AMPS 390). A totally centralized military pay system had been under development but was deferred. AMPS placed small computers at larger AFOs throughout the Air Force. Each AFO supported the military pay function at its base and at smaller installations nearby.

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One of the first problems to arise--and one of the most critical--involved the capacity of the gaining AFOs to support those units they were supposed to gain (i.e., to provide pay service). No one had ensured that the gaining AFOs had the capacity to provide service to the units.[36] Proper manning was a temporary problem, during which time personnel could work overtime or additional people could be sent in TDY. Computer support was a different issue, however, and the required support data had not been determined.

To further complicate matters, the reserve and guard units were being assigned to CONUS bases but were flying on to Korea. There was still discussion within the Air Force as to whether the units would be assigned temporarily (TDY) or permanently (PCS).[37] While this issue was being worked at Headquarters US Air Force, the Air Force Accounting and Finance Center determined that AFOs in the Pacific area (Korea, Japan, and the Philippines) did not have the capacity to handle the 14,600 additional pay records that would be required if the decision were to assign the units permanently.[38] Then came word that all reserve and guard units might be activated--an action that would bring an additional 116,000 personnel onto active duty.[39]

Meanwhile, pay records for the 14,600 personnel already activated had to be created by AFAFC. After receiving the necessary data from the Air Reserve Personnel Center, AFAFC worked valiantly to create and mail all payroll records to the support AFOs in time to pay the troops by 15 February.[40] They made the deadline;[41] but the possible call-up of additional personnel held their attention. Uncertain and unable to wait for certainty, they ordered three additional computers and pulled three more from the field. This would allow the additional pay records to be opened with an around-the-clock operation if necessary.[42] AFAFC also decided to continue opening the pay records when entire units were activated but that better service could be provided individually activated members by allowing the support AFOs to open their records.[43]

These potential problems began to ease as quickly as they had built. There was still no word on whether additional units would be activated, but AFAFC determined that existing AFOs were successfully handling the additional 14,600 personnel. Further study indicated that there was enough excess capacity throughout the network to handle the 167,000 additional pay records,[44] but that the excess capacity was not at the locations where the units would be gained. A particular problem was that very little capacity was available in the Korean area.[45]

Pay Problems

Although the field was coping with the additional work load, there were problems. Installations that had no AFO were satellites of a "parent" AFO; but members of newly activated reserve or guard units frequently discovered they were supported by a different parent AFO from the rest of the base.[46] (In peacetime, reserve or guard units were assigned support AFOs for reasons other than physical location.) This made communication and coordination very difficult; and it left the newly activated troops with a feeling of nonsupport.

Personnel offices were responsible for creating military payment orders (MPOs) to officially notify the AFOs that each member of the activated unit had arrived. Although entire units were being activated, some units had critical vacancies that were filled by individual call-ups and some members of a unit, for whatever reason, did not arrive.[47] Personnel offices were apparently not equipped to handle the extra work load--their side of the system bogged down. Vital cogs in the wheel, the personnel offices provided all entitlement data required to establish rates of pay. They also provided the data required to establish dependents' allotments or make other payments. To accomplish this, the personnel offices borrowed staff from the finance offices.[48] The loan came at a bad time for the AFOs because they were heavily involved in bringing the new units on board. But it had to be done, and the AFOs met the deadline for making the first payment to the troops.

Another irritant to AFO personnel in the field was the obsolescence of the directives for mobilization. In fact, one of the first things AFAFC did was send a message changing all mobilization guidance to the major commands and AFOs.[49] Procedures were modified and clarified to ensure that casual and partial payments could be made quickly, that allotments could be initiated or changed when members were en route, and that payments could be made to dependents. The emergency checklist also proved to be inadequate, but after consideration of the variabilities of crisis situations, AFAFC decided it could never include all possibilities. They therefore decided to leave it as is and let the AFOs request any required guidance from AFAFC.[50]

Vietnam War (1964-73)

In contrast to World War II and the Korean War, the Vietnam War began small and grew over a number of years to a large effort. The pay systems used in Vietnam evolved the same way.[51]

Location of Pay Records

Pay records for the first Air Force personnel in Vietnam were maintained in other countries (Thailand, for example). But as the number of Air Force personnel there grew, the pay records began to be maintained in Vietnam. The AMPS 390 had been implemented worldwide but could not be used in Vietnam because of inadequate facilities and electrical power. All pay records there were maintained manually, and the accounting and finance training school had a special course to teach Vietnam-bound pay technicians how to maintain an "old-fashioned" pay record.[52] Beginning in October 1969, pay records for personnel bound for Vietnam were transferred to AFAFC rather than to Vietnam. By the end of 1970, AFAFC had accumulated some 80,000 such records, and the transfer was complete.[53]

Transferring the Vietnam pay record operation had a number of advantages. A more modern and reliable system could be used--one that was compatible with the rest of the military pay world and could use the mechanized pay records already in existence. Also, it enabled the Air Force to reduce the number of support personnel in the combat zone. Finally, pay records in the combat zone were vulnerable to hostile fire, and reconstruction of destroyed records would have been extremely difficult.[54]

Direct Deposit Program

It was during the Vietnam War that the DDP (then called Checks to Financial Organizations) began to show its numerous advantages. Consider the fictional case of Captain Jones, a non-DDP user who received his check in his mailbox from the local AFO and who received PCS orders from Beale AFB, California, to Vietnam. When Captain Jones outprocessed at Beale his pay record was sent to AFAFC, where it was held in suspense until they received a notice that he had arrived in Vietnam. But Captain Jones went to Fairchild AFB, Washington, for three weeks of survival training. While there, he used a special endorsed travel order showing a portion of his pay history to draw a casual payment. After processing Captain Jones's casual payment,

the Fairchild AFO sent a verifying document to AFAFC. After survival training, Captain Jones went to California on leave. While there, he drew another casual payment (at Norton AFB) and again used his travel orders for authorization. Another verifying document was forwarded to AFAFC. When Captain Jones got to Vietnam, the AFO notified AFAFC that he had arrived. It also paid Captain Jones his full entitlements for the first two months of his Vietnam tour.[55]

Altogether, Captain Jones was paid at least three times while his pay record was in suspense at AFAFC. And when AFAFC began computing his pay, they may have had none, some, or all of the documents that supported the casual payments. As a result of these factors, Captain Jones's pay fluctuated for the first several months he was in Vietnam. (To add to the fluctuations and make things even more confusing to Captain Jones, he now received combat pay, family separation allowance, and a reduction in federal income taxes.)

Later in this study I will develop an argument for the mandatory use of the DDP for troops subject to deployment. Suffice it to say here that if Captain Jones had had the DDP, his check would have continued going to his financial organization each payday.

Frequency of Pay

Another significant difference in Vietnam was the frequency of pay. By the time of Vietnam, Air Force personnel had the option of being paid either once or twice each month; most chose twice. But Air Force regulations allowed major commands to choose whether personnel at remote locations were to be paid once or twice a month; and when Air Force personnel had first been assigned to Vietnam, Pacific Air Forces had opted for once a month.[56] This greatly simplified the pay system and, ultimately, helped the customer. Computing pay once a month allowed a longer period of time between paydays for casual and partial pay documents to travel between the AFO and AFAFC. When a partial payment was made in the first week of January for example, it could arrive at AFAFC by late February and still miss only one payday. Had there been two paydays per month, it would have missed three of them before being posted.

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Accounting and Finance Involvement

The central payment system shifted a significant part of the work load out of the theater and into AFAFC. Each month, about seven days prior to payday, AFAFC computed pay for all accounts in Vietnam. Pay authorization data was transmitted to the AFOs electronically. Upon receipt of this data, the AFO produced a payroll listing from which paychecks were prepared and issued. The process was simpler if the member participated in the DDP, in which case AFAFC sent the funds directly to the member's bank. Only a listing was transmitted to the AFO. In either case, monthly earnings statements were mailed to members from AFAFC.[57]

Because casual and partial payments were being made continually and were continually affecting monthly pay, there were numerous questions from concerned members. At first, these questions had to be relayed to AFAFC because the Vietnam AFOs did not have complete pay records. Electronic messages, mail, and telephone calls were used to handle these inquiries.[58] When the volume of questions rose to such proportions that customer service was significantly affected, AFAFC began microfilming detailed pay transaction data and sending it to the AFOs in weapon system pouches. Colored orange for easy identification, these pouches nevertheless got lost occasionally.

Normal changes to an individual's pay, such as allotments, were submitted to AFAFC electronically and by mail. The volume of allotment changes was relatively high-- approximately two per 100 accounts per month. In addition to these changes, members had been advised as part of out- processing to begin their allotments prior to traveling to Vietnam. Thus, many allotments were initiated at CONUS bases. Most of them were attributed to Uniformed Services Savings Deposit Program (USSDP) deposits, dependent support allotments, and savings allotments.[59]

System Pay Problems

In response to the long lines at the Vietnam AFOs, AFAFC commissioned a study to determine which parts of the pay system needed to be changed or improved. In essence, it found that every part of the system was breaking down occasionally but that no one part could be said to be a consistent problem. Those occasional breakdowns included:

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1. Pay records misrouted from CONUS AFOs.[60]

2. Endorsed travel orders, required for casual payments while en route, not issued by CONUS AFOs.[61]

3. Personnel departed CONUS bases without outprocessing through their AFO. Their pay records were not transferred to AFAFC, and their paychecks were returned for lack of correct addresses.[62]

4. CONUS AFOs did not forward pay records for Vietnam assignees to AFAFC.[63]

5. AFOs transmitted documents having incorrect information to AFAFC. These had to be returned to Vietnam for corrections; and some were partial payments for individuals not even assigned to the AFO that made the payment, making correction at the AFO impossible.[64]

Conclusions

It might seem tempting, faced with these problems, to throw up your hands and give up, but the AFAFC persevered and eventually solved them all. The AMPS 390 became the improved AMPS 360. Although the conversion itself was traumatic, the new system on a new computer provided the increased support needed to cope with the high volume of transactions. CONUS personnel eventually became familiar with the procedures for transferring personnel in and out of Vietnam, and misrouted records were eliminated. But one cannot help wondering. The Vietnam War was a long one; it lasted 10 years. Will we have 10 years to perfect the next battlefield pay system?

Over the last 40 years of history, we have observed some events and we have reached some conclusions:

1. The process of computing and disbursing pay takes the majority of pay personnel's time.

2. Use of agents, including multiple subagents, allows troops to be paid faster and more conveniently.

3. Troops frequently fight at locations other than where their pay records are located. A document of some type, such as the soldier's individual pay record or a manual record in the AFO, is required to document payments made in the field or away from the location maintaining the pay record.

4. The military pay function must be located close to the troops to provide proper service.

5. Proper equipment, available when needed, allows faster response to both continuing and emergency mission needs.

6. Partial and casual pays need to be posted to the pay record quickly to avoid customer confusion.

7. Centralized pay support avoids the problems caused by shortages in manning and equipment at individual locations.

8. Obsolete or inappropriate directives cause confusion and misdirected effort, resulting in less pay support than otherwise would be possible.

9. Military pay personnel need access to complete, current pay data to be able to properly serve the customer.

Assessing these factors and those reached at the conclusion of chapter 3, chapter 5 presents both long-term and short-term views of a future system designed to support troops in a hostile forward area.

NOTES

Chapter 4

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32. Ibid., 149: Archer interview.

33. Ibid., 150: History of the 237th Finance Disbursing Section, 14 May 1945 to inactivation.

34. This information comes from personal interviews during the fall of 1987 with two pay personnel who were involved in making the Korean War pay system work. As far as I can determine, when they leave government service in 1988, all firsthand knowledge of how the Air Force made the system work will be lost.

35. History, Air Force Accounting and Finance Center, 25 January 1968 to 22 March 1968, i, Air Force Historical Research Center, Maxwell AFB, Ala.

36. Minutes of meeting of the Air Force Accounting and Finance Center ANG/Reserve Call-up Working Group, 29 January 1968; and minutes of meeting of the Air Force Accounting and Finance Center ANG/Reserve Call-up Working Group, 1 February 1968; from History, Group B, Air Force Historical Research Center, Maxwell AFB, Ala.

37. Air Force Accounting and Finance Center briefing
for Colonel Gross on Status of ANG/Reserve Call-up Working
Group, Air Force Accounting and Finance Center, 1 February
1968; from History, Group A, Air Force Historical Research
Center, Maxwell AFB, Ala.

38. Ibid.

39. Minutes of meeting of the Air Force Accounting and
Finance Center ANG/Reserve Call-up Working Group, 29 January
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40. Message, chief of Reserve Pay Division, Air Force
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45. Lt Col Joseph P. Murray, deputy director, Military
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46. Memorandum for the Record, Directorate of Military
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48. History, Air Force Accounting and Finance Center,
25 January 1968 to 22 March 1968, 13, Air Force Historical
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49. Message, chief of Reserve Pay Division, Air Force
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subject: Personal Financial Services during Emergency
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Air Force Historical Research Center, Maxwell AFB, Ala.

51. This section has benefited from numerous
interviews during the fall of 1987 and the spring of 1988
with military pay personnel and other support and
operational personnel who served in Vietnam.

52. Spencer J. Schedler, assistant secretary of the
Air Force for Financial Management, briefing, "Southeast
Asia Pay System," Air Force Accounting and Finance Center,
March 1970, 2.

53. Ibid., 1.

54. Ibid., 2.

55. Ibid., 4.

56. Ibid., 3.

57. Ibid., 5, 6.

58. Ibid., 6, 7.

59. Ibid., 7.

60. Ibid., 8.

61. Ibid.

62. Ibid.

63. Ibid.

64. Ibid.

CHAPTER 5

THE IDEAL MILITARY PAY SYSTEM

The relationship between short- and long-term planning is often forgotten or overlooked. Planners who become overly concerned with "lessons learned" from the immediate past, without placing them in the long-term context, do a severe disservice to those who do their best to make the planners' plans come true. Short-term planning is not an end in itself. It is only the first portion of long-term planning. A succession of "quick fixes" begs the question "Do you know where you are going?" The project may eventually reach its conclusion without a long-term focus, but the expenditure in time and effort will greatly exceed that which is necessary.

In 1924 Brig Gen William "Billy" Mitchell, speaking of air power, said, "one has to look ahead, and not backward, and figure out what is going to happen, not too much of what has happened." Taking this theory a step further, current writers contend that there are, in fact, three legs supporting doctrine: historical experience, technological development, and professional insight.

This study took the same three views. For historical experience, an analysis of the military pay function over a 40-year time span encompassed four diverse military actions. World War II was as different from the Korean War as was the Pueblo crisis from the Vietnam War. Yet each provided pieces of the puzzle because the same general types of military pay problems occurred in each military action.

An examination of the physical and mental aspects of a potential Air Force deployment identified areas where technological developments can help accomplish a better military pay mission. It also provided criteria by which to evaluate future systems. It is now time to apply the professional insight.

Requirements Factors

To perform successfully in a hostile forward area environment, the future military pay system must address those situations identified in chapters 3 and 4. They can be summarized as follows:

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1. Supplying pay information is the most time-consuming task for military pay personnel.

2. To provide expeditious processing of requested pay changes and payments, the accounting and finance office function needs to be where the troops are.

3. Use of subagents and traveling AFO personnel reduces or eliminates the need for troops to travel to the AFO.

4. The ratio of pay personnel and pay equipment to the number of troops to be served affects the speed of customer service and, therefore, troop morale.

5. Pay record data carried by troops can allow them to be paid when no other records are available.

6. Pay personnel need to be adequately trained for the wide variety of tasks they are required to perform.

7. Mental fatigue increases in pay personnel during deployment situations.

8. Lack of formerly available pay services can cause troops to become dissatisfied.

9. Deployment initially causes a large volume of pay transactions.

Given these facts, a long-term look into the future will establish the eventual characteristics of the ideal pay system. We must look at the long-term goals first because a firm vision of where we eventually want to take the system will provide the central focus for all our short-term efforts. A short-term view will provide the characteristics of an interim system that will move the pay system along the long-term road while providing immediate payoffs in improved deployment support.

A Long-Term View

As any short-term plan must be set in the context of the longer-term view, so must the military pay system be placed in the context of financial systems used throughout the rest of the country.

US-wide Financial Systems

In the perhaps not so distant future of the United States, currency will cease to exist. As checks are gradually replacing currency as a medium of exchange today, so the future will bring a microchip-embedded computer card carrying an individual's picture, thumbprint, checking account balance, and other data. Funds earned will be added to the individual's account balance in a manner similar to today's check-to-bank programs in use at most large companies (including the direct deposit program in the military services). A computer on line with the banking system will replace the cash register seen today. The computer will instantly deduct purchases from the individual's account balance and update the card with the individual's latest checking account balance. Recurring payments will be automatically transferred between individual and/or commercial accounts.

Air Force Military Pay Systems

Air Force military service pay systems will evolve similarly. The military identification card will be a plastic computer card with the individual's picture and thumbprint. An embedded computer chip will contain duplicate pay data and other Air Force data such as personnel or medical records. When troops enter the AFO, they will encounter an office of computers manned by one military pay technician. Troops will insert their computer cards in the computers and progress through a series of screen menus to the pay data they wish either to know (such as the amount of their next pay check) or to change (such as an allotment).

If they request partial or casual payments, the computer will transfer electronic funds from their pay accounts, update their identification cards, and request the troops enter their checking account cards in the slot. The computer will post the payments directly on the cards as it transmits the data to the proper banks. If all goes well, the military pay technician will not be needed except to service the computers. Air Force troops will have joined the rest of the country's population in learning to interface directly with computers.

Military pay support of troop deployments will evolve similarly. If troops need military pay support while deployed, they will use the deployable troop support computer in their unit orderly room, which is not solely dedicated to the military pay function but also supports

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other Air Force-wide and local data bases. It accesses the military pay data base by satellite and supports the same menu-driven customer interface system used by the computer in the AFO. Since the other services' military pay systems have long been electronically interfaced, the computer will be available to troops from any service. If Air Force troops need to transfer funds from their pay accounts directly to dependents, they need only visit any military unit. There, the computer will make the deductions from the pay accounts and transfer the funds to the dependents' checking accounts. Although there may be certain transactions that are used only during deployments, the interface "help screens" will contain the entire pay regulation, cross-references, and thorough explanations. Troops who encounter difficulty can travel to the AFO for help.

Partial and casual payments will be almost nonexistent because troops will use their civilian checking account cards to pay for all purchases, including the mess hall and other purely military services. However, with proper authorization from their units, troops can use their military identification cards to draw payments from their pay accounts for transfer to their checking account cards. These transfers can also be performed at the units' orderly room computers. Troops who deploy to a country not yet interfaced with the world banking network that supports the computer banking cards will be able to purchase local currency from the deployed exchange outlet.

A small cadre of AFO personnel, including military pay personnel, will deploy to provide unique services that cannot be provided by the computer. The technicians will be there essentially to back up the computers and to ensure that the deployed personnel receive the best possible support.

Evaluation

This long-term view of the military pay system satisfies each of the requirements factors for deployment to a hostile forward area. The time-consuming task of supplying pay information to the troops will have been transferred completely out of the AFO to the unit orderly room where the troops are located. The troops will no longer need to travel to the AFO area (nor AFO personnel to the troops) for answers to repetitive questions such as "How much did I get paid?" All military pay services available during peacetime at the AFO will be available in the unit orderly room during the deployment. Also, military pay

personnel will be free to work with customers who have truly serious problems without the delay of long lines.

Elimination of the repetitive questions will also reduce the mental fatigue associated with the deployment. It will be further reduced by the menu-driven computer interface that will allow pay personnel the same easy direct access to the pay data base as the troops. Standardization of the pay system between military services will even allow the menu-driven computer interface to contain prompts* for all entitlements for all services.

The menu-driven computer interface will also eliminate the need for specialized training for deployed AFO personnel. One-time instructions from the major command or the Air Force Accounting and Finance Center will be available on the computer through the electronic mail system that will tie together all accounting and finance-related units.

The large volume of pay transactions at the beginning of the deployment will be handled in two ways. First, all troops, along with the rest of the United States, will use the check-to-bank program; therefore, their pay will continue regardless of the deployment status. There will be no need to redirect pay checks during the deployment. Second, the relatively small volume of remaining transactions (perhaps to increase life insurance) can be entered in the computer either at any unit orderly room or at the AFO.

A Short-Term View

The short-term view of the military pay system is defined as the next three to five years. The system I describe will provide an interim solution as it moves the pay system toward the overall solution just discussed.

Air Force Military Pay Systems

The standard military pay system will not change a great deal in the next three to five years. However, the peripheral functions such as dispensing funds and providing information will become increasingly computerized.

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*Prompts are computer program-generated questions that appear on the computer screen and "prompt" the user to enter information the computer needs to process a pay transaction.

A side issue that arises at this point is the ability of the average Air Force troop to understand and use an automated teller machine (ATM). This should not be a significant problem for two reasons. First, ATMs have become commonplace in today's society and their use will continue to grow. In the next three to five years, their use will be so widespread that most troops entering the Air Force will be familiar with them. Second, the Air Force is now installing ATMs to be used essentially as cash disbursing machines for pay and travel payments. Their use will gradually acquaint the troops with automated services, as will the growing use of computers throughout the Air Force.

ATMs installed in all AFOs will disburse cash payments and replace most of the functions of the former cashier cages. Troops needing casual or partial payments will go to the AFO, pick up and complete the proper forms, and return them to the military pay section. Military pay personnel will enter the transactions on the computer that is linked to the military pay data base at AFAFC. When the transactions are accepted, the computer will generate random numbers to give to the troops. The troops then will proceed to the ATMs, which will have been updated by the transactions and the random numbers. The troops will enter their social security numbers* and their random numbers, then be paid the funds requested.

Troops seeking only information about their pay will proceed directly to computers that provide inquiry access to the pay data base at AFAFC. Each individual must enter the random number printed at the bottom of the leave and earnings statement (LES) to gain access to the pay file. Even though the individual cannot change any of the information in the file, the random number will change monthly to provide security for the sensitive pay data. A system of menus will lead the individual through the inquiry until the questions are answered.

Troops seeking to change their allotments, bank, tax withholding data, or other pay function must see a military pay technician, who will give them personalized help in making the proper changes. The military pay technicians

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*Including the social security number in the ATM card data for an added cross-check could be an additional security feature but is currently against the US Privacy Act.

will use the transaction formatting system* to enter pay transactions in the computer. No forms are involved. The troops explain to the technician what type of action they wish to take, and the technician enters the appropriate data in the computer. After the transaction is constructed, but before it is forwarded to AFAFC, the technician will enter the security code number and the individual will then enter the random number from the LES. Only then will the transaction be forwarded to AFAFC. The technician's code number will not appear in any form at base level; and the random number will appear only on the troops' copies of the LES, to which only they have access. Although the technicians can easily verify the identity of the individual sitting with them, the use of the random number will protect both the technician and the government. (There is no paper backup to support the transaction, but careful security will be maintained over the modification of pay files.)

When a deployment is announced, no action concerning pay will be required by the majority of the personnel involved. All troops subject to deployment will be required to participate in the DDP. Those troops needing to establish a temporary allotment for a dependent will still process through the AFO or the deployment processing line, but the numbers will be minimal due to the increased use of the DDP and joint bank accounts. Most of the troops will leave postdated checks for dependents with whom a joint bank account is not appropriate, avoiding the allotment process altogether.

Meanwhile, pay personnel will be busily transferring certain pay history data from the base-level computer to 3-1/2-inch floppy disks.** (Name and address data are too sensitive for a combat zone in case of capture.) These

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*The transaction formatting system is a computer program that accepts the responses to questions answered by the technician, translates them into pay system transactions, transmits them to AFAFC for processing, and retranslates the AFAFC responses into easy-to-understand form.

**This type of disk was chosen because it is totally enclosed and thus more reliable in unfavorable environments. A "ruggedized" hard disk might also be usable, but the additional battery drain could cause less system availability, particularly while providing support away from the AFO area.

floppy disks will provide initial inquiry ability during the deployment and will be periodically updated by AFAFC-produced disks. Pay personnel will also download a copy of the transaction formatting system (from the base-level computers) to allow the deployed computers to function exactly the same as those at the peacetime AFO. Just before the deploying personnel leave, pay personnel will generate deployment transactions from the pay history file for all who are leaving. These transactions can be generated by individual, unit, or any other organization shown on the history file. The transactions will then be transmitted to AFAFC. This will centrally identify all deployed troops to AFAFC, which then will begin producing specialized listings for the deployment.

The AFO deployment computers will be ruggedized laptop computers with dual 3-1/2-inch drives and special cases to allow maximum cooling through disposable filter systems. They will have backlighted screens to provide easy visibility without ambient lighting. They will be battery-powered, requiring no direct connection with outside power for operation. However, the built-in charging system can remain plugged in at all times due to the wide range of electrical power from which it can charge the battery. A low electrical draw will allow several backup battery packs to be plugged in at all times without overloading the electrical circuits. Possibly the most desirable characteristic of the computers will be their small size. They will easily fit in a standard briefcase; pay personnel can hand-carry several with them when deploying, thereby ensuring continued troop support if one were to fail.

Troops who need a partial payment during deployment must see a pay technician at the AFO. The troops will tell the technician their social security number and the amount of pay they need. The technician will insert the floppy disk containing the pay history into the computer, then enter the transaction data and technician security code. The troops will then enter their random codes. A small utility program, unique to deployments, will verify that the individuals are authorized the payments by reviewing the pay history files on the disk. It will then post them to the pay history and create the appropriate transactions for the file. For troops not originally served by that AFO, and therefore not on the pay file, the computer software will authorize a casual payment based on pay grade. The troops will then proceed to the cashier's corner of the tent where they will trade preprinted documents (provided by the technician to verify a properly recorded partial pay) to the

cashier for their pay--either US or local currency. At this time, the troops will sign a log evidencing the type of transaction and their receipt of the money.

The same system will be used when pay personnel must make payments outside the AFO facilities. For example, if there is a large unit in the vicinity, pay personnel will travel there with a portable computer, make the payments, and return, with no need to take anything other than the portable computer and necessary currency.

The base-level transaction formatting system that will be used on the laptop computers will provide a sense of security. The formats, procedures, automatic edit, and automatic error control routines will be exactly like those the technicians use every day. The computer's utility program will keep the pay records in balance and provide a list of transactions to balance against cash disbursements. The deployed pay personnel will send the transaction disks to any convenient AFO for transmittal to AFAFC. When it is most expedient to mail the disks, they will mail them; however, the disks will usually be sent out on a Military Airlift Command aircraft in a special bag.

Unfortunately, the Air Force will be unable to pay troops from other services through the computerized system. However, in cases where troops from another service do not have access to their own AFO, casual payments can be made under rules established by that service. Payments to other service troops will be processed by entering certain basic information in a "free-form" transaction that will flow to AFAFC for further processing. Troops from the other services will be required to prepare casual pay forms since there will be no security password system to document their requests for payment.

Based on the deployment codes transmitted earlier by the peacetime AFO, AFAFC will produce a weekly file of all transactions. Sorted by unit, these transactions will be identified by the same numbers shown on each LES. The listings will be transferred electronically via AUTODIN to the peacetime AFO. The AFO will print them and give them to the unit, which will be responsible for forwarding the listings to the deployed element. The lists will be easily understood by the troops because the same easy-to-understand annotations that explain the transactions on each troop's LES will be used to document the transactions. Each midmonth payday, AFAFC will transmit a similar file showing deployed troops' pay, again identified by the random number on each LES. This file will not be needed at the end of the month because each LES will provide the data.

Evaluation

The short-term system will drastically reduce the work load for the deployed AFO. There will be no manual processing--and no special training will be required since the system used during the deployment will be the same as that used at the peacetime AFO. And since the units will receive all the pay information needed by the troops, trips to the AFO for information will not be necessary.

Partial and casual pays will be reduced by the mandatory use of the DDP by those who deploy; and those that remain will be significantly easier to process because the AFO will have the pay history file on disk. The computer software will keep the file current and verify the payment amount. It will even process partial pays for those troops not from the same peacetime base as the deployed AFO, thus reducing the amount of "hassle" aimed at pay personnel.

Pay personnel will not necessarily be expected to travel, but the computer will work just as well on the road; and it is considerably lighter than the assortment of forms that would ordinarily be required. If a computer breaks, spares will be available; and if needed, additional computers will be shipped in from another AFO. Although the computers will have been issued specifically to those AFOs that might deploy, they will be in use throughout the AFO network as additional input devices. They will be readily available for loan if required.

The computers will support all possible transactions, at a peacetime base because they will use the same computer software. As a result, the troops will enjoy the same level of service while deployed as they do during peacetime. This will free deployed troops from other than ordinary financial worries. It will also allow AFO personnel more time to spend on serious pay problems and other aspects of deployment support.

Conclusions

It is always difficult to bring a study such as this down from the theoretical to the practical. Theoretical recommendations are relatively easy to support because they have no inherent limits; practical recommendations must be implementable without reorganizing the entire military to suit the military pay function. After all, who supports whom? Each element of the pay system described in the short-term view is a practical application of today's

emerging technology.   The view for long-term application is
a combination of technologies and concepts that are logical
extensions of today's technologies.   Chapter 6 provides the
recommendations to begin moving in that direction.

CHAPTER 6

WALKING THE LINE OF CHANGE

Perhaps the most formidable challenge in designing
systems and procedures is defining what needs to be done to
ensure an orderly progression from the current situation to
the desired goal. The object of this study was to define
the wartime military pay function, explain its evolution
over time and through conflict, and propose effective,
systematic means to meet the requirements for servicing
troops in future conflicts. The preceding chapters provided
that data.

The one factor those chapters could not provide was
cost. The current level of military pay support provided to
Air Force troops is unprecedented; there is no reason why
that support should not continue during a deployment. Yet
in an era where weapon systems are being dropped from
development due to national and defense budget constraints,
it is not enough to say the system is self-justifying
because it will support the morale of the troops and
therefore allow them to concentrate on their jobs rather
than on whether they and their dependents will be paid
correctly. Even "troop support systems" must compete for
priorities.

The hostile forward area military pay system proposed
here is so advanced, however, that the supporting computer
hardware is not yet available. Therefore, the cost is
unknown.

Yet, this study has firmly established the benefits
that would accrue with the new system. Consequently, the
Air Force Accounting and Finance Center should make a firm
commitment to provide troops deployed to a hostile forward
area the same level of pay support as that provided every
day throughout the Air Force. Until such time as the cost
can be accurately estimated, AFAFC should promote the system
described in chapter 5 with low-cost tests during deployment
exercises. This will ensure immediate improvements in both
troop support and AFO deployment procedures. In addition,
once the system can be prototyped, it should be easy to
"sell" through the budget process as a readiness improvement
item.

What Needs to Be Done

Chapter 5 presented both long- and short-term goals for improving the support of troops deployed to a hostile forward area. Outside the scope of this study are many other accounting and finance office areas that could be similarly improved. A comprehensive review of the overall work load is needed. Given adequate planning, the entire AFO operation can be improved with one total, integrated package. And this approach will avoid divergent development efforts which sometimes yield systems that are excellent when standing alone but limited in real usefulness because they do not interface with each other.

AFO support in exercises (such as Bright Star) has traditionally been under the direction of the major commands. The AFAFC has participated by providing policy where necessary, and there is certainly nothing improper about this. In fact, each has been acting according to its function. However, the AFAFC Directorate of Plans and Systems has the potential to greatly improve AFO support by designing improved systems, both manual and automated, for use during deployment. In addition, the AFAFC Directorate of Network Operations has for some time been tasked with the responsibility for deploying an AFO function in the event of a fast-breaking emergency anywhere in the world. Yet, because the major command accounting and finance functions have always furnished the needed support to exercises and to the occasional real-world deployments, the directorate has never tested its deployment capability. Consequently, there has not been a top-down review by the AFAFC to determine what improvements can be made in deployment support.

Before the implementation of the military pay support system recommended here is begun, the AFAFC Directorate of Plans and Systems and its Directorate of Network Operations should observe and participate in an exercise deployment. This would enable AFAFC to determine what systems, in addition to the military pay systems, can be modified to improve deployment support. This procedure will ensure integration of the systems design efforts and provide an integrated product that will save the greatest amount of manpower.

One of the many maxims you hear in the computer world is "find the computer program (software) you want to run, and then buy a computer that will run it, not the other way around." While this might normally be good advice, it does not hold in this case. One of the factors found to be significant in chapter 3 was the environmental temperature. In the deployment we postulated, the temperature would

fluctuate from a low of 77 degrees to a high of 131 degrees. As an example only and not as a comprehensive evaluation of available hardware, the latest laptop portable computer from one manufacturer selling to the government requires a temperature between 50 degrees and 90 degrees to operate. And it can only be stored in temperatures between -40 degrees and 125 degrees. In addition, it requires a relative humidity between 20 and 80 percent. Consequently, one of the more difficult tasks in implementing the new hostile forward area military pay system will be identifying a computer that can operate in a wide range of environments.

AFAFC should begin researching available computer hardware to determine whether portable computers presently available will operate in the extreme environmental conditions likely to occur in a hostile forward area. If such computers are presently available, samples should be purchased and deployed during an exercise to ensure that they will operate under the extreme physical conditions likely to be present--for example, dust and electrical power variances.

One factor that would speed the transition from a short-term system to a long-term system is the early availability of military identification cards that will store military pay accounts in a data chip or magnetic strip. (The theory of a single DOD military identification card for all services has been discussed frequently over the past 10 years.) Chapters 3 and 4 demonstrated that military pay support can be most effective when the troops' military pay account information is instantly available.

AFAFC should initiate a program to evaluate the identification card technology currently available and test those options that would provide the most immediate payback in military pay support. This development has a high pay-off potential due to the considerable groundwork already performed in conjunction with the automated teller machine project. Such efforts should also be undertaken in concert with the personnel community, which has had a similar development program since the early 1980s.

Another factor that would considerably improve pay support now is increased use of the DDP. The question of whether to mandate DDP throughout the Air Force, as was done in the Army, has been a controversial one since the early 1980s. There have been numerous arguments supporting both sides; but each time the issue has been raised, the decision has been not to mandate its use throughout the Air Force. But since the percentage of participation in the DDP has been continually rising and now hovers around 94 percent,

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the 6 percent not participating in the DDP will probably decrease to nothing over the next several years. The support of deploying troops is considerably easier, not only for the AFO but also for the troops themselves, when the continued flow of the troops' pay to their bank accounts is ensured by the DDP.

AFAFC, through Air Staff coordination, should direct that all Air Force troops subject to deployment be required to participate in the DDP. The stream of conveniences provided to the 6 percent not already participating greatly outweighs opposing arguments. And it significantly increases Air Force warfighting capabilities by eliminating one of the prime distractions to the troops--disruption in pay support.

Smaller Pieces of the Puzzle

Aside from the large issues discussed earlier, this study has identified a number of less significant areas where improvement would ease the jobs of both AFO and military pay personnel and improve pay support to the troops. I have chosen not to pull them out of context and list them here because I do not want them to detract from the larger issues previously discussed. As a small example, and without too much sarcasm, I note that one would wonder, given the large number of deployments in which the Air Force participates, why there are still arguments over whether security police or AFO personnel should guard the cash that is deployed with the AFO.

Summary of Recommendations

For ease of review, the following recap lists the major recommendations of this study.

1. AFAFC should make a firm commitment to provide troops deployed to a hostile forward area the same level of pay support as that provided every day throughout the Air Force. Until such time as the cost can be accurately estimated, AFAFC should promote the system described in chapter 5 with low-cost tests during deployment exercises.

2. Before the implementation of the military pay support system recommended here is begun, AFAFC Directorate of Plans and Systems and its Directorate of Network Operations should observe and participate in an exercise deployment. This would enable AFAFC to determine what

systems, in addition to the military pay systems, can be modified to improve deployment support.

   3. AFAFC should begin researching computer hardware to determine whether portable computers presently available will operate in the extreme environmental conditions likely to occur in a hostile forward area.

   4. AFAFC should initiate a program to evaluate the identification card technology currently available and test those options that would provide the most immediate payback in military pay support.

   5. AFAFC, through Air Staff coordination, should direct that all Air Force troops subject to deployment be required to participate in the DDP.

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