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PERSONNEL AUTOMATION PROBLEMS
DURING
OPERATION DESERT STORM

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A thesis presented to the Faculty of the U.S. Army
Command and General Staff College in partial
fulfillment of the requirements for the
degree

MASTER OF MILITARY ART AND SCIENCE

by

JAMES H. COMISH, MAJ, USA
B.A., Brigham Young University, Provo, Utah, 1980

Fort Leavenworth, Kansas
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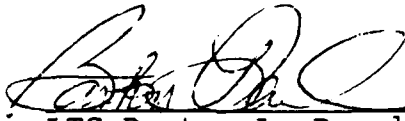
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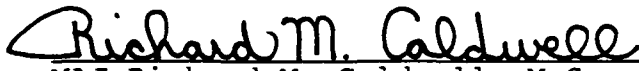
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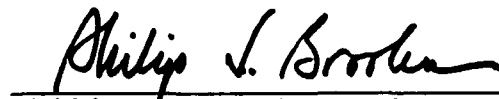
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The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

ABSTRACT

PERSONNEL AUTOMATION PROBLEMS DURING OPERATION DESERT STORM
by MAJ James H. Comish, USA, 124 pages.

This study investigates the automation problems that were encountered in support of personnel accounting and strength reporting during Operation DESERT STORM. This is of particular interest because of recent efforts to offset force structure shortfalls with automation initiatives. Operation DESERT STORM was the first conflict to put those initiatives to test. This thesis investigates how well personnel automation performed during the Gulf War with focus on the problems needing resolution.

This study first explains the personnel automation doctrine that existed at the time of Operation DESERT STORM. The study then explains how personnel automation was actually practiced during the war in contrast to doctrine. The study then describes the impacts or problems that resulted from the differences in doctrine and practice. And finally, the study presents recommendations of how to address the personnel automation shortcomings.

With an understanding of the problems encountered in Operation DESERT STORM, the personnel community may now work to find solutions. Learning from these problems, the personnel community may be able to build a better automated personnel system to meet the challenges of tomorrow's wars.

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I would also like to acknowledge the members of my thesis committee. They provided excellent direction in my research. Their suggestions were always helpful. And their encouragement helped me see this effort through to the end.

I would be remiss if I failed to recognize all the many people who submitted documentation from which my research was based. The people I interviewed were also very helpful. We all share the hope that all efforts made to document the problems encountered with personnel automation during the war will prove useful in bettering personnel automation support in the future.

Finally, I must recognize my wonderful family. My children, being so small, never really understood why their father was locked up in the study so much of the time. My wife, Karen, was especially supportive through the ordeal. She pushed me through the tough spells and took up the slack with family matters. Clearly, I could not have completed this thesis without her support.

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CHAPTER 1

INTRODUCTION

The purpose of this chapter is not only to introduce this thesis but also to provide a general understanding of it. The chapter describes the nature of the research question, puts the thesis into perspective, and most importantly, it provides overall direction to the thesis.

Purpose

The purpose of this thesis is to identify the major automation problems, in accounting for the force and reporting unit strengths, encountered by the personnel community during Operation DESERT STORM. The purpose of this thesis is not to provide solutions to these problems, although some general recommendations are made at the end.

For those who are already familiar with automation terminology and personnel doctrine, and who are interested in only an overview in terms of practical effects, may want to go directly to chapters 6 and 7.

Background

Over the past five or six years the Active Army has undergone significant changes in its force structure. In the

process, the Army cut many spaces from personnel units/organizations. The personnel community soon realized that it would have to depend on automation initiatives to compensate for the loss of force structure. These automation initiatives would be especially critical during wartime, as units would be unable to make up for their manpower shortfalls with Table of Distribution and Allowances (TDA) augmentation, or shadow clerks, as they often do in peacetime. Consequently, the personnel community has focused its efforts on increasing its automation capabilities.

Operation DESERT STORM put those capabilities to the test. When Iraqi forces invaded, seized, and occupied Kuwait on August 2, 1990, nobody really knew the extent to which the United States was willing to go to ensure the withdrawal of Iraqi forces from Kuwait. Eventually the nation's total commitment (all services) mushroomed to a force of more than 527,000 and included more than 1,200 tanks, more than 2,200 armored personnel carriers, more than 100 warships, more than 1,800 fighters, bombers, and other warplanes, and more than 1,700 helicopters.¹

Naturally the Army committed the major share of the total manpower. On August 6, 1990, the first two US Army officers landed in Saudi Arabia to begin organizing for Operation DESERT SHIELD.² By the time the Army was ready to commence ground operations during Operation DESERT STORM there were 306,700 soldiers within the theater of operations.

Of this number, 230,800 were members of the Active Component; 36,800 were members of the National Guard; 36,300 were members of the USAR [United States Army Reserve] Troop Program Units (TPU) and 2,733 were Individual Ready Reservists. Additionally, six (6)...recalled retirees were deployed.³

A force of this size posed many challenges for the personnel community, from mobilization through deployment, during sustainment, and or to redeployment. One of the biggest problems personnel managers had to address was accounting for people within the units and just keeping up with the aggregate strength of the force. To accomplish this monumental task, personnel managers utilized their automation capabilities, many of which they had only recently acquired.

This thesis describes and examines the major shortcomings experienced in automation support for the personnel community during the war. It also gives some feel for the progress made in automation, since the personnel community began working its automation initiatives to offset its force structure shortfalls.

Scope

The scope of the thesis does not include automation as it supports every functional area of personnel management. Rather, it only addresses automation support of accounting for the force (personnel accounting - defined later in the chapter) and reporting unit strengths (strength reporting - also defined later in the chapter). There are three reasons

for this. First, it would be difficult to address all personnel functional areas within the confines of one thesis. Second, the personnel community has automated only the personnel accounting and strength reporting areas to any significant degree. Finally, all other personnel functional areas are dependent on personnel accounting and strength reporting for data.

Additionally, it is not the intent of this thesis to address every possible problem encountered. Rather, the intent is to focus on those problems of major significance which had a broad impact on the units participating in the operation. Thus, this thesis focuses on only the universal, overriding problems while screening out those which are either symptomatic of the major problems, or are of minor importance. The thesis shows that there were fundamental decisions, policies, and system shortcomings which created a myriad of personnel automation problems for the personnel community.

Primary and Secondary Questions

This thesis answers the following primary and secondary questions:

Primary Question: What were the major personnel automation problems encountered during Operation DESERT STORM?

Secondary Question: What was the personnel automation doctrine at the time of Operation DESERT STORM (explained in terms of functionality, software, interfaces, hardware, and communications)?

Secondary Question: How was personnel automation actually performed during Operation DESERT STORM (explained in terms of functionality, software, interfaces, hardware, and communications)?

Secondary Question: What were the impacts or problems that resulted from the differences between doctrine and execution (explained in terms of functionality, software, interfaces, hardware, and communications)?

Assumptions

Only one principal assumption was made in the research and writing of this thesis. That assumption is, that the 'lessons learned' reports, after action reports, and other materials examined included the major problems encountered by the personnel community with regard to automation support of personnel accounting and strength reporting during Operation DESERT STORM.

Definitions

As already mentioned, the functional focus of the thesis is on strength reporting and personnel accounting. Strength reporting includes the management of and accounting

for the force on a numerical basis. Personnel accounting is the actual management and accounting for individual soldiers on a by-name basis. Together, personnel accounting and strength reporting account for soldiers and report their duty status. This, in turn, may form the basis for critical battlefield decisions. Both of these personnel services interface with and support replacement, casualty, and postal operations, and all other critical personnel services.

Throughout the thesis, the term personnel automation is used. Personnel automation refers to the automation of personnel functions, such as casualty reporting or preparing an application for overseas reassignment, etc. If the term personnel automation is used alone, without qualifying a specific personnel function, it means automation in support of personnel accounting and strength reporting.

The thesis describes personnel automation doctrine, practice, and system problems, in terms of functionality, software, interfaces, hardware, and communications. Collectively, these are the "component parts of personnel automation."

Functionality is the application of personnel policies, procedures, processes, and force structure.

Software is those personnel computer programs that support/automate the functionality. Examples include:

the Standard Installation/Division Personnel System (SIDPERS) and the Command and Control Strength Reporting System (C2SRS).

Interfaces are the automated means which allow for the exchange of data between software systems. Without interfaces software systems cannot share or use each other's data.

Hardware is the computer equipment itself, such as: the Tactical Combat Service Support Computer System (TACCS) and the Corps/Theater ADP Service Center (CTASC).

Communications refers to the means or process of electronically transmitting data between physical locations.

All of these component parts make personnel automation work. A weakness in any one of these component parts may jeopardize the overall effectiveness or utility of personnel automation.

Limitations

It is important to understand the limitations of this thesis. There is virtually no published documentation on the subject. Documentation is based almost entirely on documentary evidence (primary sources) and for the most part includes firsthand accounts reported in lessons learned reports, after action reports, and interviews.

Consider first the limitations of lessons learned reports. Understandably, most of the lessons learned reports are problematic in nature and not always constructive. Those who reported the lessons learned did not always understand that many of the problems they described were really symptomatic of larger problems beyond their level of operation/involvement. Those who submitted lessons learned reports may not have understood the big picture of personnel automation and where their operation/involvement fit into the overall scheme.

The limitations of after action reports are more apparent. After action reports are more accomplishment oriented, often de-emphasizing problems with the focus on the successes of the operation. It is sometimes difficult to glean serious problems from after action reports. After all, few people or organizations are likely to report their problems, especially if they resulted from their own mistakes or oversights.

Finally, consider the limitations of interviews. Like after action reports, with interviews there is a risk of people describing their experiences in ways that protect themselves or the organizations they were part of. There may also be a problem with hidden agendas which could overshadow efforts to ascertain what actually occurred.

In spite of these limitations, lessons learned reports, after action reports, and interviews together make excellent primary resources, particularly when they substantiate the same findings, because of their compensating value. The limitations of one type of primary source is compensated by the strengths of another. Chapter 2, Literature Review, explains, in detail, the value of each of the primary sources.

Delimitations

The thesis covers a period from August 1990 through August 1991. This includes the mobilization, deployment, sustainment, and redeployment phases of the Persian Gulf War. This time period includes Operation DESERT STORM (the armed conflict) as well as those operations immediately before and after. However, to impose constraints on the scope of the study so as to make the research feasible, the primary focus of the thesis is the time frame of Operation DESERT STORM. There is some comment on what occurred before and, to a smaller degree, on what occurred immediately after, only because they shed light on the problems that the personnel community encountered during the actual war.

A second time delimitation imposed on the thesis is related to the research material itself. Often, with time, people's perspectives change and become more biased. Consequently, the evidence used is largely fresh, firsthand

accounts and observations. All research material was created within one year after the ending date (Aug 1991) of the deployment. In fact, most of the research material was developed within just a few months of the operation.

Significance of Thesis

The significance or importance of this thesis is that it serves as a mechanism for identifying those major personnel automation problems which the personnel community must address. In some cases the solution may be just a matter of not repeating the same policy decisions in other circumstances. While in other instances the solution may require major system changes or perhaps even a complete redesign of the current system. Whatever the remedy, the findings of this thesis may provide a basis for enhancing the current automated personnel systems or for influencing the development of future systems. Although problems with personnel automation during the war could not be avoided, ignoring those problems and doing nothing to solve them must be avoided. The personnel community needs to learn from its mistakes and become better prepared for the next war. This thesis helps begin that process.

CHAPTER 1

ENDNOTES

¹"Forces Committed," Military Review Vol. LXXI-9 (September 1991), 81.

²John J. Yeosock, Lieutenant General, US Army, "Army Operations in the Gulf Theater," Military Review Vol. LXXI-9 (September 1991), 3.

³US Army Concepts Analysis Agency, ODCSOPS, HQDA, HQDA DESERT SHIELD/DESERT STORM After Action Report (U) Vol. II, Main Report (Washington, DC: Department of the Army, September 1991), DAPE-1.

CHAPTER 2

LITERATURE REVIEW

This chapter establishes a framework for understanding the documentation which supports the thesis. A general assessment of the literature is provided and, finally, this chapter establishes the place of the thesis itself in the literature.

Secondary Source Material

There has been little research material published on personnel automation during Operation DESERT STORM. As it is still very early after the war, there are only a few magazine articles that focus exclusively on personnel automation.

The Center for Army Lessons Learned (CALL), at Fort Leavenworth, did produce their final report concerning the war. However, their findings are classified and consequently the thesis could not refer to them. The CALL report only addresses personnel automation briefly. The many unclassified primary sources contributed to the findings of the CALL report and support many other findings, but in much greater detail. Even with limited secondary sources, there is substantial unpublished, primary source documentation available. This material forms the basis of the research for this thesis.

Primary Source Material

An important source for research material to support this thesis was the Army Lessons Learned System (ALLS). CALL is the Army's controlling agency or focal point for ALLS. The purpose of the system is to provide a mechanism for collection of Army lessons-learned from battalion through echelons above corps, to the Total Army.¹ The system provides a nonthreatening means for Army employees to identify useful lessons. A researcher cannot identify either the individual submitting the observation or the unit/organization from which he/she originates. Researchers must preserve this right to anonymity or they will not receive access to the research material.

The format of the lessons learned is standard and compatible with the Joint After Action Reporting System (JAARS) format.² Army units/staffs submit lessons learned which impact other military services (Navy, Air Force, etc.) into JAARS. CALL has over 6,700 Army lessons learned related to Operation DESERT STORM on a database. Of these lessons, over 100 deal directly with personnel automation.

CALL is the source of another valuable type of research material - unit after action reports. CALL serves as the Army's repository for all after action reports from Operation DESERT STORM. Units, major commands (MACOMS), agencies, and elements of Headquarters, Department of the

Army (HQDA), have all provided CALL with copies of their reports. CALL has hundreds of volumes available in various formats. Not all of them address personnel automation during Operation DESERT STORM. Many of them do. The after action reports from the United States Total Army Personnel Command (PERSCOM), 10th PERSCOM, 1st PERSCOM, Personnel Groups, and from Gls/AGs/Sls were of particular value to this thesis.

Research material for the thesis also included documentation from the Mobilization Automation Task Force. This body was formed by the Office of the Deputy Chief of Staff for Personnel (ODCSPER) at Headquarters, Department of the Army (HQDA), to study personnel automation in support of the war and make recommendations. The task force included many of those who were directly involved in personnel automation support during Operation DESERT STORM. According to the task force report, the personnel automation issues were the most significant shortcomings in mobilization in support of Operation DESERT STORM. Although the focus of the task force's efforts was on mobilization and demobilization, they also addressed sustainment problems. The task force, for the most part, identified general problems, laid out broad requirements and tasks, and provided justification for the continued funding of future personnel automated systems.³

Other documentation used as research material included briefing slides and working papers. In some cases, Government offices provided copies of the file records and

briefing slides they used at the time of Operation DESERT STORM. Some of the slides were especially helpful in graphically portraying personnel automation doctrine and actual practice during the operation.

Interviews were another valuable research resource for the thesis. These interviews were with Government employees who worked with personnel automation during Operation DESERT STORM. They included individuals from each level of operation (brigade, division, corps, theater PERSCOM, HQDA PERSCOM, HQDA ODCSPER). Those interviewed provided a unique perspective into the problems encountered which was not always apparent in the hard copy documentation.

General Assessment of Research Material

Overall, the research material is representative of the Total Army. Each echelon identified the major problems addressed in this thesis through every type of research material used to support the thesis.

Most significantly, Army units/staffs made their observations immediately after the war while memories were still fresh and largely unbiased. In most cases, units/staffs produced their reports and quickly provided them to researchers within a few months after the war.

Role of the Thesis in Literature

This thesis plays an important role as part of the literature on the topic. It ties together observations from the tactical level to the top of the personnel system. It also provides an objective analysis of the available research material. Finally, this thesis is important to the literature on the subject because it constitutes the first major attempt at synthesis. It provides to future researchers a comprehensive study of the major shortfalls encountered with personnel automation during the Gulf War.

Chapter 2 Conclusions

Understanding the nature of the literature which supports this thesis is important. This thesis is based on original research largely from firsthand accounts. As this thesis is one of the first secondary sources on the topic, it has an important place in the literature. Just as it is important to understand the nature of the research material, it is essential to understand the research methodology which is described in the next chapter.

CHAPTER 2

ENDNOTES

¹US Army, AR 11-33, Army Lessons Learned Program: System Development and Application (Washington, DC: Department of the Army, 1989), 3.

²AR 11-33 (1989), 7.

³US Army, Office of the Deputy Chief of Staff for Personnel (ODCSPER), ODCSPER Mobilization Automation Task Force - Action Plan (Washington, DC: Department of the Army, 1991), 1-24.

CHAPTER 3

RESEARCH METHODOLOGY

The purpose of this chapter is to describe the methodology used to conduct the research and write this thesis. There were four phases to the research methodology. They were a collection phase, an organization phase, an analysis phase, and an interpretation phase. Each of these phases are explained in detail in this chapter.

Collection Phase

This phase of the methodology required the gathering of the research materials for the thesis. The materials generally collected dealt with one of the following areas of interest: documentation concerning personnel automation doctrine at the time of Operation DESERT STORM; documentation describing how personnel automation actually operated during Operation DESERT STORM; and to some degree, documentation of the problems or impacts that the personnel community encountered from noncompliance with doctrine (either because the personnel community ignored the doctrine and just did not follow it, or because the doctrine was broken and they could not implement it if they wanted to).

To be useful, the research material needed to conform with several criteria. Documentation had to come from official Government sources. Lessons learned reports and after action reports had to document firsthand observations. Interviews had to be with individuals who had firsthand knowledge of the topic. Interviews were especially useful because they provided a means to clarify documentation and validate findings.

Organization Phase

The organization phase involved organizing the collected information into groupings or categories. The first category concerned personnel automation doctrine and policies at the time of Operation DESERT STORM. The second category dealt with how the personnel community actually performed personnel automation during the operation. Finally, the last category had to do with the consequences or problems resulting from the conflict between the first two categories.

After completing all phases of the methodology, the findings concerning these categories evolved into Chapters 4, 5 and 6 of the thesis. Each of these three categories lent themselves to further subdivision into the component parts of personnel automation which include: functionality, software, interfaces, hardware, and communications. These subdivisions became the sections within chapters 4, 5, and 6 of the thesis.

Analysis Phase

This phase of the research methodology initially required assessing the value of the organized information and making decisions about what material was appropriate for use in the thesis and what was not. This phase also required an actual comparison between the way the doctrine and policies intended personnel automation to function and how it actually did function during the operation.

Interpretation Phase

This phase of the research methodology required formulating the thesis findings. To avoid the possibility of misinterpretation, these findings required validation through interviews. The people interviewed were not only able to clarify problems and circumstances but they were able to verify the findings as accurate. Of course, with confirmed findings in hand, the writing of the thesis followed. The next three chapters are the product of the research methodology.

Chapter 3 Conclusions

Understanding the research methodology is important. One of the significant steps in the research methodology for this thesis was the validation of all findings by interviews with people who participated in Operation DESERT STORM.

Although the research methodology was simplistic, the end result was findings based on thorough, substantiated research.

CHAPTER 4

PERSONNEL AUTOMATION DOCTRINE

This chapter describes personnel automation doctrine as it existed at the time of Operation DESERT STORM. The intent of this chapter is to describe the doctrinal system in isolation from what really happened (Chapter 5 addresses execution). Wartime doctrine requires: streamlined procedures and policies, SIDPERS-Wartime and C2SRS software, interfaces between SIDPERS and other automated systems, interfaces between personnel functional areas, TACCS hardware at tactical units, CTASC II hardware at echelons above division, and communications between echelons. This chapter explains automation doctrine in support of personnel accounting, and strength reporting, using the components of personnel automation (functionality, software, interfaces, hardware, communications).

There is no single source for doctrine addressing personnel automation. Some of the sources include: Army publications; regulations, field manuals, training circulars, etc.; Department of the Army policies and interface agreements; software functional descriptions/specifications, and automation architecture plans. FM 12-6 Personnel Doctrine, FM 100-10 Combat Service Support and AR 600-8, Military Personnel Management are the primary sources of much

of the doctrine explained in this chapter. The Field Systems Directorate of the Total Army Personnel Command (PERSCOM) provided much of the other doctrinal information not addressed in these publications.

Functionality

At the time of Operation DESERT STORM, doctrine prescribed that when units go to war they operate in a wartime mode, performing only those military personnel functions critical to success on the battlefield. Doctrine never intended for units to maintain all of the many peacetime functions in wartime.

The primary role of the personnel system [during wartime] can be best summarized as managing combat-essential information to support the decision making process and delivering replacements, mail, and other personnel services.

The critical military personnel functions on the battlefield include: replacement operations, strength management, personnel database management, personnel information management, and personnel accounting and strength reporting which also affects casualty and postal operations (see figure 4-1, page 24). Other military personnel functions are either nonessential or not performed at all on the battlefield, examples include: career planning, retiree support, recruiting, retention, transition processing, and many types of soldier applications.

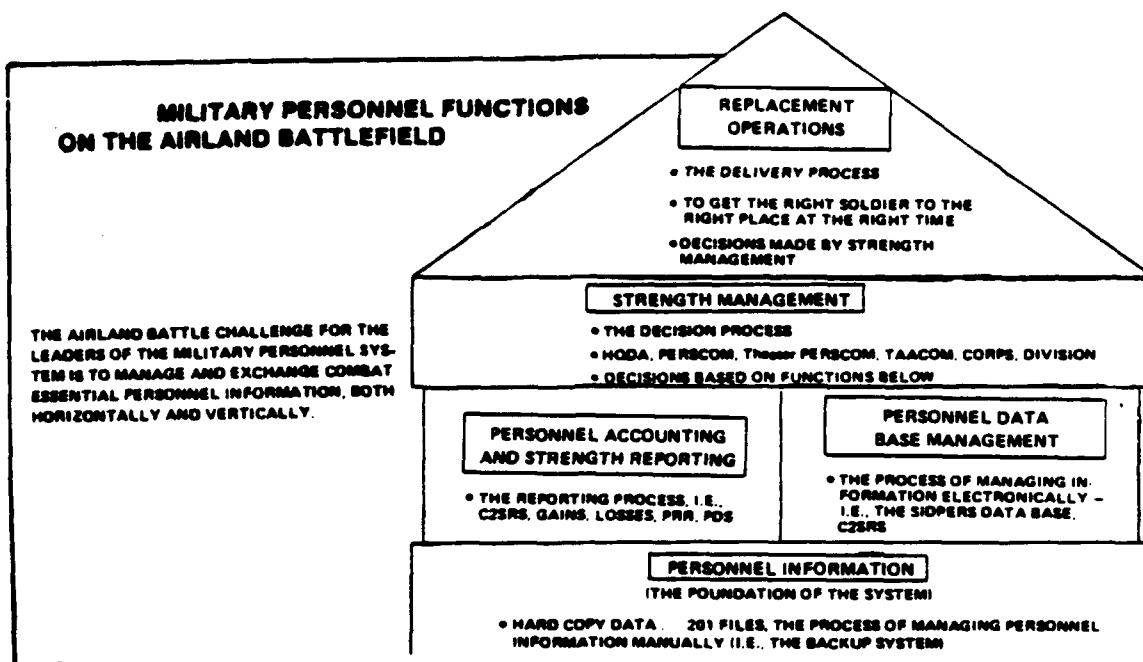


Figure 4-1

Accounting for individual soldiers, and unit strength reporting on the battlefield, are critical functions for units and personnel elements at all echelons. The information generated from personnel accounting and strength reporting supports the battlefield commander and the tactical decision making process. This information enables the commander to determine his personnel capabilities for battle. Those units with acceptable strength levels (determined by the commander) are operationally effective to be committed in battle. Those that are not operationally effective, because of shortages of key personnel, may not be committed in battle or they may be relegated to a secondary or supporting role.² The doctrine concerning personnel accounting and strength

reporting existent at the time of Operation DESERT STORM is explained below.

Units accomplish personnel accounting and strength reporting through both hasty and deliberate means. Units produce hasty reports manually to support the decisions required by the current battle. Units also submit transactions to update the personnel database (SIDPERS-Wartime) to ensure continuing accuracy. From this database, automation clerks then produce deliberate reports to support personnel management decisions such as assignment and crossleveling decisions.

Although units produce hasty reports manually, they may also produce the same reports with tactical automation capabilities. The section entitled: Hardware describes these capabilities. Figure 4-2, on page 26, shows a sample of the hasty report. Figures 4-6 and 4-7 show samples of the same information but in automated formats produced from tactical automation equipment. The section of the chapter entitled: Software describes these automated samples on pages 35 and 36.

Strength managers at every echelon must reconcile hasty and deliberate information on a daily basis. This involves matching the two types of reports and resolving the differences.³

PERSONNEL STATUS REPORT										Requirements Control Symbol ATCD-35	
For use of this report, use PM 12-6 and document agency or TRACOC											
REPORT NUMBER	4-10			DTG PREPARED	101800 Apr 96			UNIT	1/33 MECH (TF)		
PART I - PERSONNEL DAILY SUMMARY											
	ADTH	ASBO	POF	MS	MS	MS	COMBAT LOSSES	TOTAL LOSSES	GARS	REMARKS	
COMBATANTS	45	40	38	1	2	0	0	3	1	10 ML OPERATIONAL	
WARRIORS	2	2	2	0	0	0	0	0	0	9 TOW OPERATIONAL	
EVACUATED	773	701	689	15	13	7	3	38	11		
TOTAL	820	743	729	16	15	7	3	41	12		
PART II - PERSONNEL REQUIREMENT REPORT											
SERVICE	AD	GRADE	REQD	SERVICE	AD	GRADE	REQD	SERVICE	AD	GRADE	REQD
11A00		O4	1	19K30		E6	1				
11C00		O3	2	19K20		E5	2				
11C00		O2	2	19K10		E4	1				
12B00		O2	2	19K10		E3	1				
11B10		E3	3	31V10		E4	2				
11C20		E5	1	45710		E3	1				
11H20		E5	3	63120		E5	2				
11H10		E4	2	91B20		E5	4				
11M40		E7	2	91B10		E4	6				
11M30		E6	4	91B10		E4	2				
11M20		E5	11	91B10		E3	2				
11M10		E4	2.5								
11M10		E3	9				9.1				
PART III - REMARKS											
(1) AIDMAN SHORTAGE STILL CRITICAL											
(2) NOTE: REPORT REFLECTS ADDITIONAL C1/30 ARMOR CO (SEE ATTACHED ROSTER)											
(3) DRIVER & GUNNER NEEDED FOR 1 ML TANK											
DA FORM 5387-R, DEC 84											

Figure 4-2

Data flows within a division through both personnel channels and command channels. The manual, hasty reports and the same reports produced on tactical automation equipment pass through command channels (unit commanders - battalion S1 - brigade S1 - division G1/AG - Corps AG). Deliberate SIDPERS-Wartime reporting passes through personnel channels (unit clerks - battalion personnel and administration center - personnel service company - personnel group).

Units accomplish deliberate SIDPERS-Wartime reporting through personnel channels. Units provide the necessary information for the battalion S1/PAC to prepare the transactions. The battalion S1/PAC then provides the transactions to the personnel service company (PSC) which services the battalion. Clerks at the PSC integrate the information/transactions into the SIDPERS-Wartime database. PSC clerks then further process the data through the personnel group to the theater PERSCOM and ultimately back to the Total Army PERSCOM.⁴

Units accomplish hasty reporting through command channels. Unit commanders first annotate changes to their unit strengths on their battle rosters. When the battalion S1 receives this information, he creates hasty reports. The battalion S1 also provides a copy of the hasty reports to the PAC. The PAC generates the same reports on their tactical automation hardware using the Command Control Strength Reporting System (C2SRS - described in greater detail in the section entitled: Software). Both the hasty reports and the C2SRS reports then flow to the brigade main command post (CP). The brigade S1 uses the reports to manage the brigade's personnel assets and influence planning. The brigade main CP forwards the hasty and C2SRS reports to the division main CP to influence planning and decision making at that level. The division main CP sends the hasty and C2SRS reports to the division G1/AG rear and to the division

tactical command post (DTAC). The DTAC uses the information to fight the current battle and the AG/G1 uses it to manage the division strength. The division AG/G1 rear forwards the hasty and C2SRS reports to the corps AG.⁵

From the corps level the hasty and C2SRS reports then flow through personnel channels. The corps AG receives the hasty and C2SRS reports from the division AG/G1 rear. The staffing of the corps AG comes principally from the personnel group as the corps AG is also the group commander. Personnel group clerks use the reports for strength/personnel management purposes. The personnel group provides the hasty and C2SRS information to the corps main CP to provide the corps G1 and commander with the information needed to fight the battle and make plans as needed. The personnel group also forwards the hasty and C2SRS reports to the theater PERSCOM where they use the reports for strength management purposes and for replacement decisions. The theater PERSCOM provides the hasty and C2SRS information to the theater Army CP to assist in battlefield planning. The theater PERSCOM also provides the information to Total Army PERSCOM which constitutes the requisitions for the theater.⁶

Figure 4-3, on page 29, illustrates the personnel accounting and strength reporting data flow for divisional units.

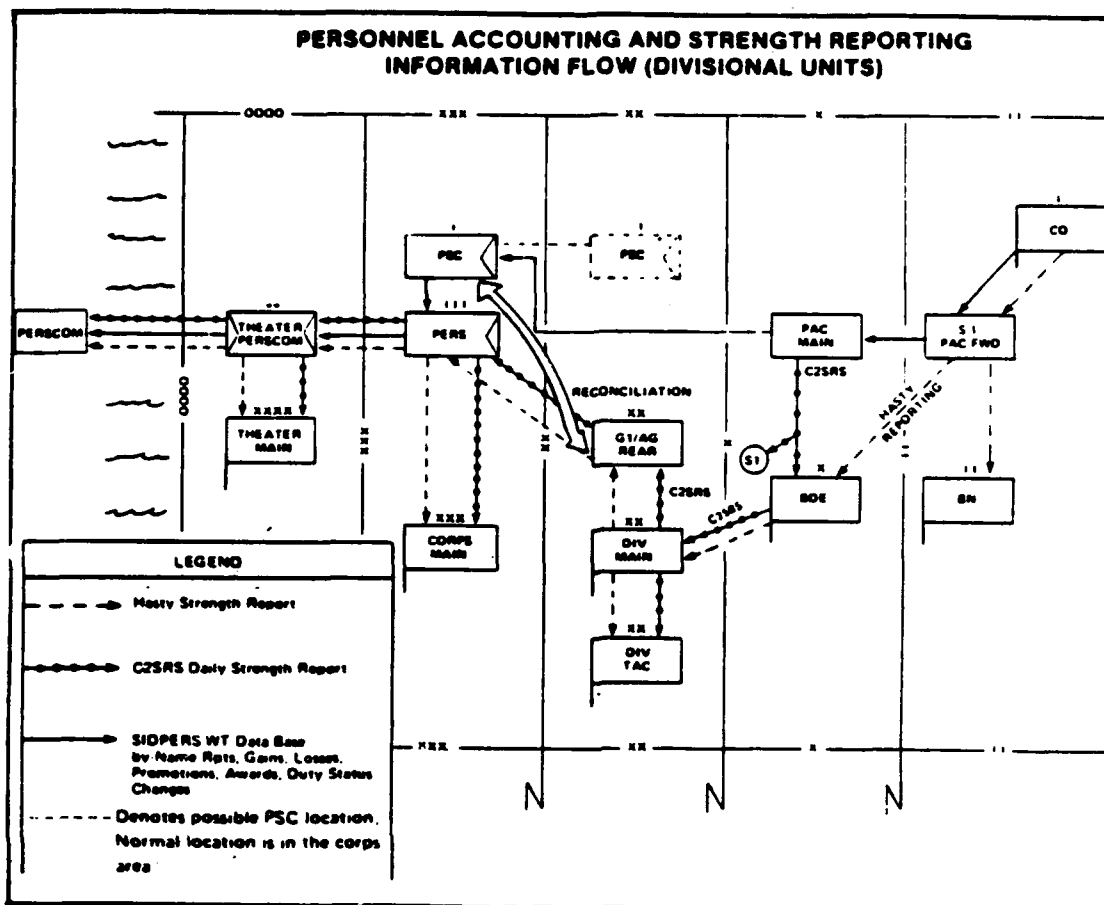


Figure 4-3

Figure 4-4, on page 30, shows the personnel and strength reporting data flow for nondivisional units and separate battalions. The data flow is similar to the data flow for divisional units, however, non divisional units report directly to the corps AG or personnel group and only provide informational copies of their hasty reports to the division they support. Separate battalions of a division do not have brigades to report through and consequently, they

provide their hasty and C2SRS reports directly to the division G1/AG rear.

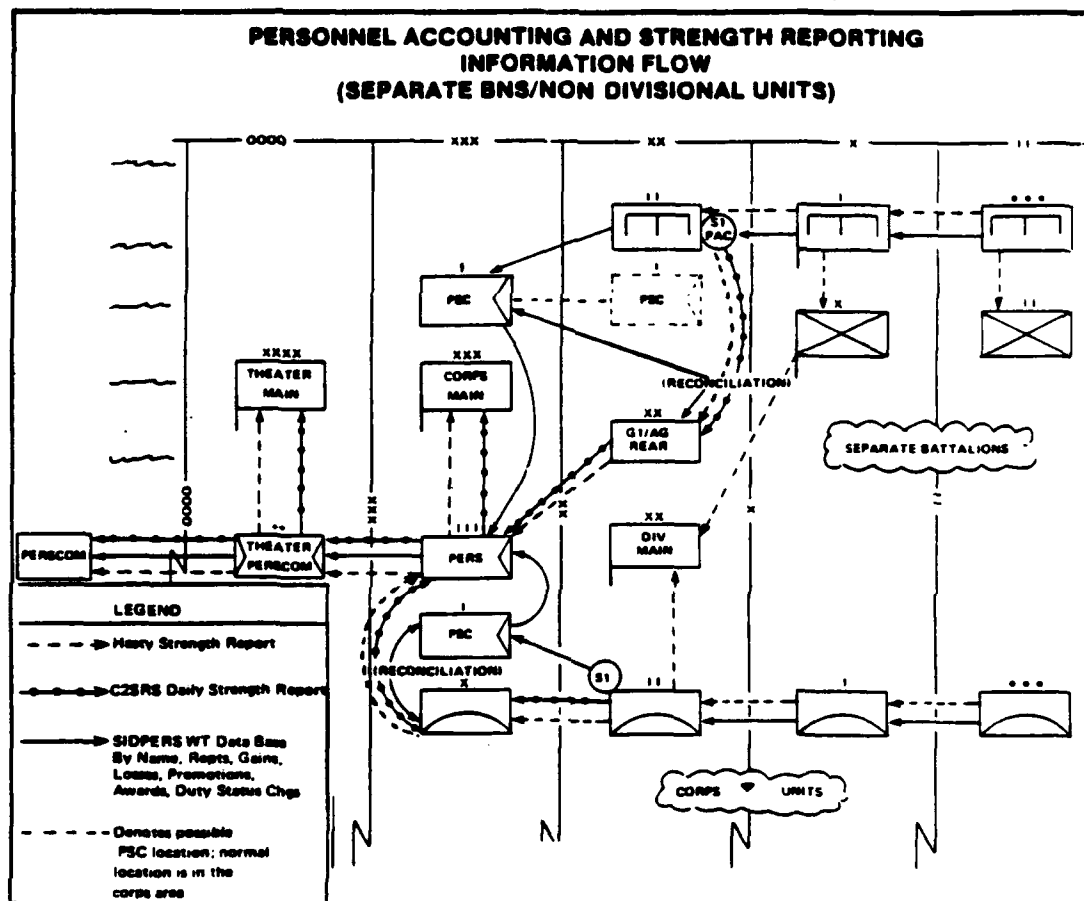


Figure 4-4

Wartime doctrine concerning personnel accounting and strength reporting, as it existed at the time of Operation DESERT STORM, was not complete. It did not address the data flow for units at echelons above corps, within the

communications zone (COMMZ). Nor did doctrine explain how the flow of data should transition from an immature theater, with few personnel elements/units deployed, to a mature theater, with the full deployment of personnel elements/units to include a theater PERSCOM.

At the time of Operation DESERT STORM, wartime doctrine, regarding automation as it supports personnel accounting and strength reporting, required the maintenance and tracking of "combat essential information." Doctrine did not require the maintenance of all the data which supports the many peacetime personnel functions.⁷

Doctrine also intended that personnel automation during war allow for "wartime required" strength accounting as opposed to "peacetime authorized" strength accounting.⁸ Required strength accounting allows personnel managers to maintain and manage units at the manning levels considered necessary for those units to perform their wartime missions. Authorized strength accounting allows personnel managers to maintain and manage units at peacetime strength levels (generally lower than their wartime strength levels). The latter, over the years, has also been a system for allocating shortages as much as for filling units.

Doctrine at the time of Operation DESERT STORM did not provide for a system that would allow for maintenance of both required and authorized strength accounting as the

scenario escalated from deterrence or limited combat activity to a medium or high intensity conflict. The doctrine provided for only one of the two systems, either for peacetime or wartime processing.

Wartime personnel doctrine at the time of Operation DESERT STORM also provided for the practice of using task organization. A task organization is the temporary realignment of units usually for tactical purposes. During battle, task organizing is common, especially among combat units. Task organizing impacts a unit's command relationships, and it impacts upon the unit's reporting procedures. Usually, there is an expectation that the original command alignment is re-established at some point in the future.⁹

A basic assumption underpinning personnel doctrine at the time of Operation DESERT STORM was that, during wartime the required personnel force structure would be present in the field in the strength necessary to support the force. The general expectation was that the personnel force structure would be built up gradually, as more and more units deploy. Doctrine did not provide for a scenario where the Army deploys the personnel force structure long after the rest of the force is on the ground.

At the time of Operation DESERT STORM, there existed three separate and distinctly different field systems

for the three Army components, the Active Army (AC), the Army National Guard (ARNG), and the United States Army Reserve (USAR). The Active Army maintained SIDPERS in peacetime and SIDPERS-Wartime during war. The Army National Guard maintained SIDPERS-ARNG. And the United States Army Reserve maintained SIDPERS-USAR. These three automated systems were largely noncompatible and supported only the unique functionality of the components for which they were designed.

Software

The personnel software intended for use during war included SIDPERS-Wartime and the Command and Control Strength Reporting System (C2SRS). The personnel community designed both of these systems to make personnel accounting and strength reporting more streamlined during war. Consequently, both of these software systems focused on providing only the critical information needed to support battlefield commanders and personnel managers.

The personnel community designed SIDPERS-Wartime for the purpose of accounting for the force based on required strengths. The true benefit of the software is that it cuts down significantly the number of transactions needed to maintain the personnel database. Even though there are considerably fewer data elements to keep updated, there are sufficient data elements to produce the needed deliberate wartime personnel management reports.

C2SRS is TACCS based software and a subset of SIDPERS. Doctrine prescribed that it be at battalion, brigade and division levels. The software's principal reports/products include an automated battle roster, an automated personnel summary, an automated personnel requirements report, and a task force personnel summary.

The battle roster is the C2SRS' principal personnel accounting document. The battle roster is the main source of data for generating the other C2SRS reports. The key element of the battle roster is the soldier's actual duty status (present for duty - PDY, missing in action - MIA, etc.). Figure 4-5 shows a sample of the C2SRS battle roster report below.¹⁰

BATTLE ROSTER REPORT

BATTLE ROSTER REPORT

Page # 1

UNIT NAME:
(UPC: ANNAO)

TIME OF REPORT: 9206091030

POSITION DATA					PERSONAL DATA							
SEQ	TITLE	AUTH	BR	DMOS	BR	NUMBER	NAME	SSN	GR	PHOS	DYEST	DC TP-UPC
10102	COMMANDER	CPT	12800		BR1061	BATTEN	JON	052849283	1LT	12800	PDY	
10103	EXECUTIVE	1LT	12800		BR1062	WEBSTER	DE	052927484	1SG	19234	PDY	
10104	FIRST SERG	1SG	19234									
10105	TANK CDR/M	SFC	19E40									
10106	SUPPLY SGT	SSG	76Y30		BR1082	BOWMAN	ARN	052684159	SSG	76Y30	PDY	
10107	ARMORER	Sgt	76Y20		BR1013	JOHNSON	JA	052214043	Sgt	76Y20	NON	
10108	GUNNER/ASS	Sgt	19E20		BR1014	MCDONELL	P	052214004	Sgt	19E20	NON	
10109	NBC NCO	Sgt	54E20		BR1013	ANDERSON	O	052213774	Sgt	54E20	NON	
10110	TANK COMMA	Sgt	19E20		BR1012	SLAUGHTER		052213774	Sgt	19E20	NON	
10111	TANK CREWM	SP4	19E10		BR1030	ROMINE	M	052649554	SP4	19E10	PDY	
10112	TANK CREWM	SP4	19E10		BR1037	MONTE	AND	052649554	SP4	19E10	PDY	
10113	TANK CREWM	SP4	19E10		BR1036	HOLENBERG		052649533	SP4	19E10	PDY	
10114	TANK CREWM	PFC	19E10		BR1022	LEAVERTON		052270521	PFC	19E10	PDY	
10115	TANK CREWM	PFC	19E10		BR1023	EDMOND	JOE	052271129	PFC	19E10	PDY	
10117	PLATOON LE	1LT	12800		BR1081	KLUESNER	S	052665429	1LT	12800	NON	
10118	PLATOON LE	1LT	12800		BR1087	HALL	HELVI	052740165	1LT	12800	PDY	
10119	PLATOON LE	1LT	12800		BR1080	BEACH	DANI	052762345	1LT	12800	PDY	
10120	PLATOON SE	SFC	19E40		BR1002	REEVES	FDW	052154851	SFC	19E40	NON	
10121	PLATOON SE	SFC	19E40		BR1009	OLSON	ROBE	052494283	SFC	19E40	NON	
10122	PLATOON SE	SFC	19E40		BR1031	BOY	OREGON	052234211	SFC	19E40	PDY	
10123	TANK COMMA	SSG	19E30									

Figure 4-5

The personnel summary is a strength reporting document. It reports the aggregate totals of the units current operating strength by officer, warrant officer and enlisted personnel. Doctrine intended for clerks to generate this report both manually and by using C2SRS. The personnel summary shows the gains, losses and duty status changes from the last report. Figure 4-6 shows the automated personnel summary below.¹¹

AUTOMATED PERSONNEL SUMMARY																
PART I - PERSONNEL SUMMARY - DETAIL														PAGE 1		
REPORTING UNIT: 0015 AR BN 01 AR BN										DATE/TIME OF REPORT: 9206091038						
0015 AR BN 01 CO A																
M P C	AUTH	PREVIOUS		--GAINS--		LOSSES		-----DYST CHANGES-----						-CURRENT-		OP STR%
		ASG	OPSTR	REPL	ATCH	RSG	KIA	ATD	MIA	WIA	NBL	OTC	OTH	ASG	OPSTR	
						DED				HOW	HOS	TDY				
O	5	4	4	0	0	0	0	0	0	1	0	0	0	4	3	60.0
W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
E	57	54	52	2	0	0	2	0	0	8	2	0	0	52	42	73.7
T	62	58	56	2	0	0	2	0	0	9	2	0	0	56	45	72.6
0015 AR BN 01 CO B																
M P C	AUTH	PREVIOUS		--GAINS--		LOSSES		-----DYST CHANGES-----						-CURRENT-		OP STR%
		ASG	OPSTR	REPL	ATCH	RSG	KIA	RTD	MIA	WIA	NBL	OTC	OTH	ASG	OPSTR	
						DED				HOW	HOS	TDY				
O	5	5	5	1	0	0	1	0	0	0	0	0	0	5	5	100.0
W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
E	57	55	41	2	0	0	2	0	0	2	0	0	0	41	39	68.4
T	62	60	46	3	0	0	3	0	0	2	0	0	0	46	44	71.0

Figure 4-6

The personnel requirements report is a strength reporting product that shows the unit's personnel requirements by rank and skill or specialty. These requirements constitute the units requisitions for personnel

replacements. Clerks produce this report both manually and by using the C2SRS software. Figure 4-7 shows a sample of the C2SRS report below.¹²

AUTOMATED PERSONNEL REQUIREMENTS REPORT

PERSONNEL REQUIREMENTS REPORT

CURRENT UNIT: PART I - OFFICERS OR 2 POSITION SPECIALTY PAGE 1

REPORTING UNIT: 0015 AR BN 01 AR BN TIME OF REPORT: 9206091100

(LPC: ARMAN)

LT-IL7		CAPTAIN		MAJOR		LTC		COL		TOTALS			
U	A	R	U	A	R	U	A	R	U	A	R	U	A
7	3	0	7	3	0	7	3	0	7	3	0	7	3
0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	21	21	0	9	4	3	2	1	1	0	1	0	0
20	0	0	1	1	0	0	0	0	0	0	0	20	20
20	1	1	0	0	0	0	0	0	0	0	0	1	1
20	0	0	0	0	0	0	0	0	0	0	0	0	0
20	1	1	0	0	0	0	0	0	0	0	0	0	0
20	1	1	0	0	0	0	0	0	0	0	0	0	0

SAMPLE

PERSONNEL REQUIREMENTS REPORT

CURRENT UNIT: PART II - MG BY 4 POSITION REG PAGE 1

REPORTING UNIT: 0015 AR BN 01 AR BN TIME OF REPORT: 9206091100

(LPC: ARMAN)

REG	ANTH	AGE	REG	FILL
0015	1	1	0	100
0020	1	1	0	100

PERSONNEL REQUIREMENTS REPORT

CURRENT UNIT: PART III - ENLISTED BY 3 POSITION REG PAGE 1

REPORTING UNIT: 0015 AR BN 01 AR BN TIME OF REPORT: 9206091100

(LPC: ARMAN)

SL-30		SL-30		SL-30		SL-40		SL-50		TOTALS			
U	A	R	U	A	R	U	A	R	U	A	R	U	A
7	3	0	7	3	0	7	3	0	7	3	0	7	3
0	0	0	0	0	0	0	0	0	0	0	0	0	0
002	0	0	0	0	0	0	0	0	0	0	0	0	0
11C	21	15	0	0	0	0	0	0	0	0	0	0	0
11D	1	1	0	0	0	0	0	0	0	0	0	0	0
002	0	0	0	0	0	0	0	0	0	0	0	0	0
11C	21	15	0	0	0	0	0	0	0	0	0	0	0
11D	1	1	0	0	0	0	0	0	0	0	0	0	0

Figure 4-7

The task force personnel summary is a strength reporting document only available for use within C2SRS. Doctrine at the time of Operation DESERT STORM did not require units to produce it by hand as a hasty report. The task force personnel summary is comparable to the personnel summary except that it shows the personnel status for task forces. The personnel database does not generate the report, rather, clerks must key in all of the data into

the C2SRS software. The data from this report does not update any database whether that be the database which directly supports the C2SRS software or the SIDPERS-Wartime database. The report is strictly a manually fed C2SRS report providing only minimal strength reporting capability. Figure 4-8 shows a sample of this C2SRS report below.¹³

AUTOMATED TASK FORCE PERSONNEL SUMMARY																	
PART 1 - C2 TASK FORCE REPORT - ORGANIC															PAGE 1		
REPORTING UNIT: 0015 AR BN 01 AR BN										DATE/TIME OF REPORT: 9206050005							
0015 AR BN 01 CO A																	
M P C	AUTH	PREVIOUS		--GAINS--		LOSSES		-----DYST CHANGES-----							-CURRENT-		OP STR%
		ASS	OPSTR	REPL	ATCH	RSO	KIA	RTD	MIA	MIA	NBL	DTC	OTH	ASS	OPSTR		
						DED					HOW	HOS	TDY				
O	5	4	4	0	0	0	0	0	0	0	0	0	0	4	4	80.0	
M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
E	57	57	56	2	0	0	4	0	0	2	0	0	0	54	52	91.2	
T	62	61	60	2	0	0	4	0	0	2	0	0	0	58	56	90.3	
SAMPLE																	
0015 AR BN 01 CO B																	
M P C	AUTH	PREVIOUS		--GAINS--		LOSSES		-----DYST CHANGES-----							-CURRENT-		OP STR%
		ASS	OPSTR	REPL	ATCH	RSO	KIA	RTD	MIA	MIA	NBL	DTC	OTH	ASS	OPSTR		
						DED					HOW	HOS	TDY				
0	5	4	4	1	0	0	0	0	0	0	0	0	0	5	5	100.0	
														0	0	0.0	

Figure 4-8

C2SRS was the product of Soldier Support Center and Total Army PERSCOM. The intent of the software was to provide units and personnel managers with an easy to use, menu driven software package in support of contingency and wartime personnel operations.

The personnel community intended their automated personnel systems to provide timely and responsive data. The community also intended for these systems to track different categories of personnel activated and deployed. These software systems were also to provide accountability of personnel through demobilization.

Personnel doctrine at the time of Operation Desert Storm also prescribed that data be furnished from field units through personnel channels to the corps and theater levels. Corps and theater personnel units/elements would have roll-up capability as well as the ability to maintain their own databases. Doctrine required personnel automation to extract combat essential personnel information from the command databases [unit databases] and provide consolidated databases to corps and theater-level strength, casualty, and postal managers.¹⁴ From these corps/theater databases, personnel managers could produce their own personnel accounting and strength reporting documents to support the unique requirements of the corps or theater commanders in making the critical tactical and operational decisions of the battlefield.

Interfaces

At the time of Operation DESERT STORM, personnel automation agreements (between system proponents/managers) called for an interface to exist between the Mobilization

Personnel System (MOBPERS) and SIDPERS for the purpose of accessioning reserve component soldiers on active duty.¹⁵ With this interface in place, the reserve component could transfer mobilization data from their own automated systems directly into SIDPERS. The agreement intended this to occur without extensive rekeying of information.

The interface agreement between these two systems required MOBPERS to provide to SIDPERS only the minimum essential data required to allow accessioning of soldiers into the active Army. The data included: name, grade, date of rank, military personnel class, social security number, sex, race, service component, specialty/skill information, and the gaining unit processing code.

Personnel doctrine also prescribed that interfaces exist for the purposes of providing and exchanging data to other major functional areas. Figure 4-9, on page 40, shows the reliance of other personnel functional areas on personnel accounting and strength reporting for data. These other personnel functional areas included: personnel information management, personnel database management, replacement operations, casualty operations, and postal operations. Doctrinally, the exchange of data from personnel accounting and strength reporting to these other functional areas needed to occur to have efficient and effective personnel service support.

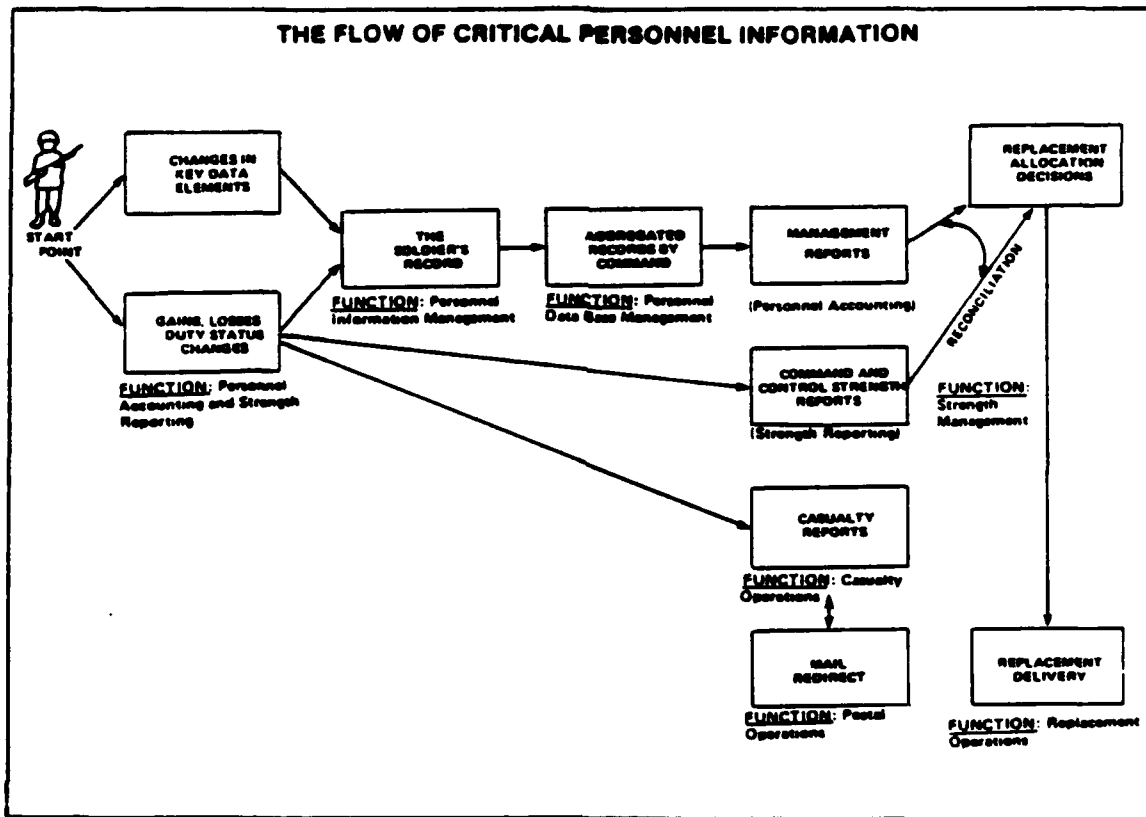


Figure 4-9

Hardware

Doctrine prescribed that TACCS boxes would be located at separate company, battalion, brigade, and division levels.¹⁶ The TACCS is a portable, ruggedized microcomputer designed for field use. The TACCS includes a central processing unit with hard disk drive, a keyboard, a screen, and a printer. It uses the standard 5 1/4 inch floppy disk.

The dot matrix printer is durable and ideal for field use. The TACCS is capable of telecommunications with both secure and nonsecure transmission of data over FM radio and over military or commercial telephone lines. Personnel clerks generally operate the equipment.

TACCS-Enhanced equipment, when fielded, will significantly upgrade tactical automation capability. TACCS-Enhanced provides a substantial increase in memory with a significant improvement in processing time. Prototypes of the equipment were used during Operation DESERT STORM.

There are drawbacks to both TACCS and TACCS-Enhanced equipment. Although the TACCS printer is ruggedized for field use, it does not produce the near letter quality output needed for the production of orders, evaluation reports, and award certificates. Furthermore, neither hardware system allows for use of standard commercial parallel and serial printers which could provide the near letter quality. Also, neither system is expandable to accommodate the addition of external tape, hard, or CD-ROM drivers. Because of the availability of MS-DOS compatible laptop computers in recent years, TACCS users have complained of the size and expense of TACCS equipment (approximately \$18,000). After all, TACCS or TACCS-Enhanced equipment does not fit in a ruck sack (it is carried in three containers requiring two people to carry each container) and it is expensive to replace.¹⁷

At the time of Operation DESERT STORM, doctrine prescribed for the Corps Theater ADP Service Center II (CTASC II) to be at corps and theater levels. The CTASC II is a mobile ADP system which provides computer support to CSS units in the corps and echelons above corps assigned to logistical, medical, personnel, and financial missions. Currently, it is a mini-computer housed in three integrated, light weight shelters mounted on three Commercial Utility Cargo Vehicles (CUCV). A standard integrated command post (CP) tent is also provided to be used outside for additional work space.¹⁸ SIDPERS has never been adapted to work on this equipment.¹⁹

An alternative to the CTASC II is the CTASC I. Although doctrine did not prescribe for its use, SIDPERS could be processed on it.²⁰ The CTASC I is a self contained main frame computer. It is housed in expandable vans with its own power generating capability. Forty personnel run and maintain this system. Operators are automation specialists with extensive computer training. See Figure 4-10, on page 43, for the basic pictorial concept of a CTASC system.

At the time of Operation DESERT STORM, the personnel community fully intended that all units deployed with hardware be trained on how to use their systems. The community further expected that the reserve units which were issued TACCS boxes prior to Operation DESERT STORM be totally proficient in using this hardware. This would

have required those reserve units to conduct sustainment training regularly after the new equipment training which they received at the time of system fielding.

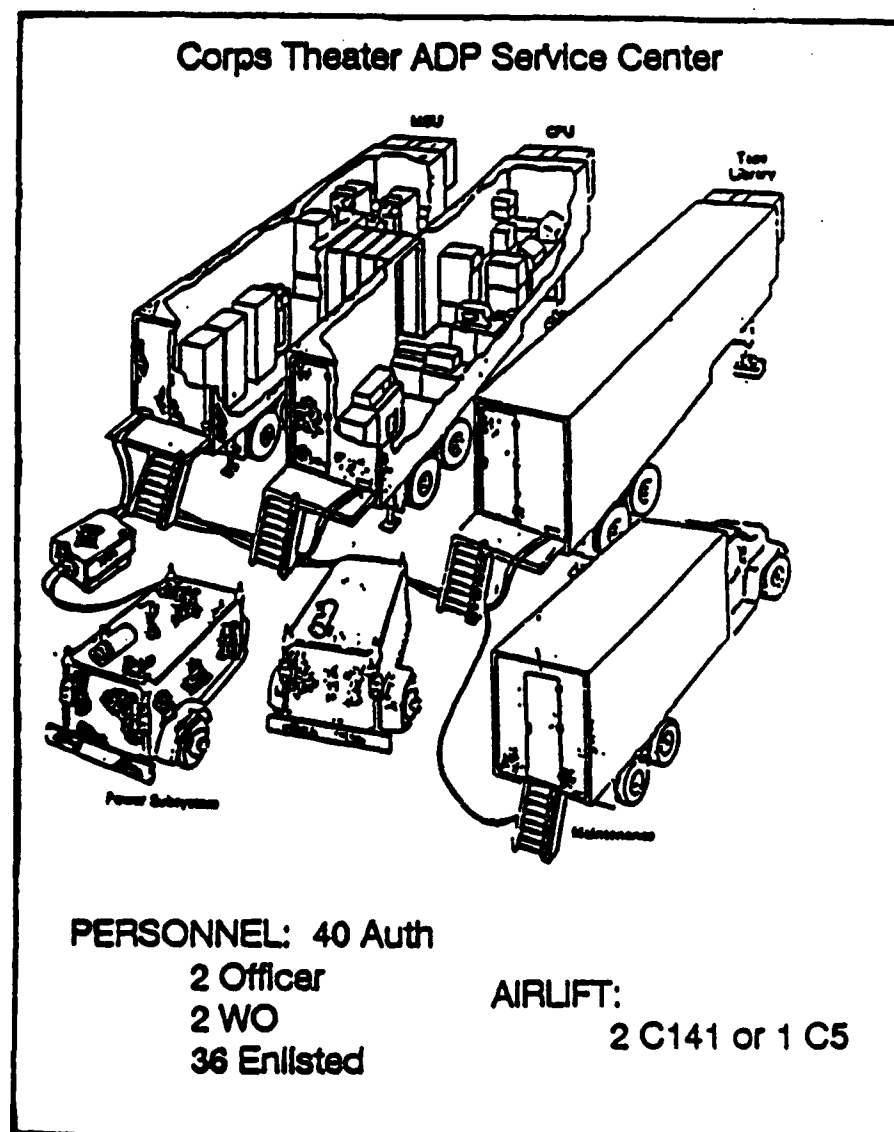


Figure 4-10

Communications

Doctrine provided for communications capability to exist between echelons for the purpose of electronically

transmitting data ultimately to DA PERSCOM back in the United States or Europe. Battalions, brigades, and divisions were supposed to be able to transmit their data through TACCS over wire or FM radio. The worse case would require them to hand carry floppy disks to the corps level.²¹ The corps was also supposed to be able to transmit data to the theater PERSCOM over wire or FM radio. Lastly, the theater PERSCOM was supposed to be able to transmit data directly to Total Army PERSCOM by way of DDN or AUTODIN. Figure 4-11 is an illustration of this communication concept/architecture.

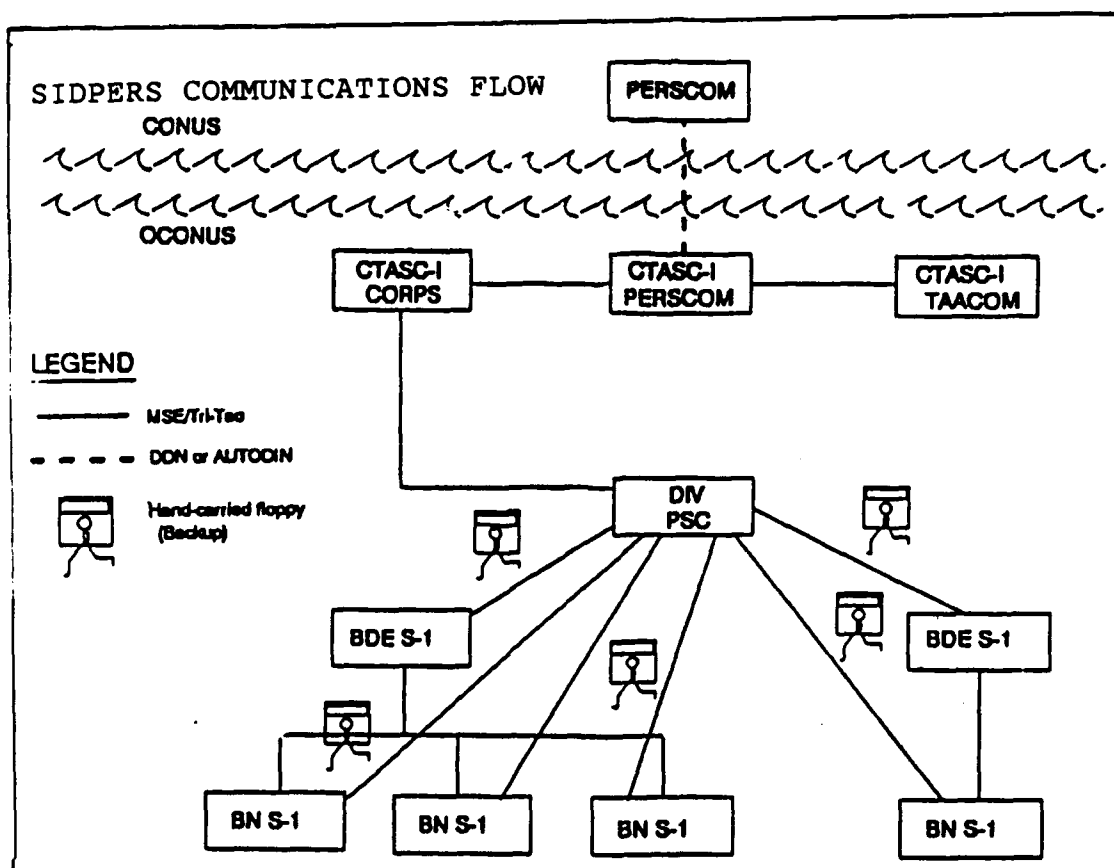


Figure 4-11

Chapter 4 Conclusions

Doctrine existed at the time of Operation DESERT STORM for the automated support of personnel accounting and strength reporting. This chapter describes that doctrine. In general terms, wartime doctrine required: streamlined wartime policies and procedures, SIDPERS-Wartime and C2SRS software, interfaces between automated systems, interfaces between personnel functional areas, TACCS equipment at the tactical unit level, CTASC II hardware at the corps and theater levels, and communication capability between echelons.

A fully implementable personnel automation doctrine would have benefited the personnel community during Operation DESERT STORM. Although the doctrine seemed sound before the war, the personnel community soon realized that much of it could not be implemented during the operation. Instead, personnel units and elements found they had to improvise in order to make personnel automation work, even to accomplish the most rudimentary levels of strength reporting and personnel accountability.

CHAPTER 4

ENDNOTES

¹US Army, FM 12-6, Personnel Doctrine (Washington, DC: Department of the Army, 1989), 19.

²US Army, FM 100-10, Combat Service Support (Washington, DC: Department of the Army, 1988), 4-2.

³FM 12-6 (1989), 32.

⁴FM 12-6 (1989), 37.

⁵FM 12-6 (1989), 36, 37.

⁶FM 12-6 (1989), 37.

⁷FM 12-6 (1989), 19.

⁸FM 12-6 (1989), 22.

⁹US Army, ODCSPER, ODCSPER Mobilization Automation Task Force Briefing (Washington, DC: Department of the Army, 1990), not numbered.

¹⁰FM 12-6 (1989), 32.

¹¹FM 12-6 (1989), 32, 33.

¹²FM 12-6 (1989), 33.

¹³FM 12-6 (1989), 33.

¹⁴US Army, AR 600-8, Military Personnel Management (Washington, DC: Department of the Army, 1989), 19.

¹⁵US Army, DA PAM 25-6, Configuration Management for Automated Information Systems (Washington: Department of the Army, 1991), and Field Systems Directorate, US Total Army Personnel Command, which is the source of all information concerning interface agreements between other automated systems and SIDPERS.

¹⁶FM 12-6 (1989), 32.

¹⁷US Army, Headquarters, USARCENT, USARCENT After Action Report, Vol 2, Tab A (G1-AG) (Ft. Leavenworth: Department of the Army, 1991), 1.

¹⁸US Army, CTASC II Basis of Issue Plan (Washington, DC: Department of the Army, date unknown).

¹⁹John E. Brady, telephone interview while he was at Field System Directorate, notes of interview in possession of author, 21 February 1992.

²⁰John E. Brady, phonecon 21 February 1992.

²¹FM 12-6 (1989), 32.

FIGURES

4-1 - US Army, FM 12-6, Personnel Doctrine (Washington, DC: Department of the Army, 1989), 18.

4-2 - FM 12-6 (1989), 35.

4-3 - FM 12-6 (1989), 38.

4-4 - FM 12-6 (1989), 39.

4-5 - FM 12-6 (1989), 33.

4-6 - FM 12-6 (1989), 34.

4-7 - FM 12-6 (1989), 34.

4-8 - FM 12-6 (1989), 35.

4-9 - FM 12-6 (1989), 19.

4-10 - US Army, Field Systems Directorate, PERSCOM, Working Papers (Washington, DC: Department of the Army, 1991).

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CHAPTER 5

PERSONNEL AUTOMATION DURING OPERATION DESERT STORM

This chapter deals with the actual working/employment of personnel automation during Operation DESERT STORM. The personnel community found it difficult and sometimes even impossible to implement existing personnel automation doctrine. Consequently, there were often clear differences between the doctrinal expectations and the way personnel automation actually worked during the operation. Expectations of/for functionality were excessive. Software was untimely, inflexible, cumbersome, and not responsive enough to the needs of the Total Army. Interfaces were not always in place where they should have been, while existing interfaces did not adequately support the automated personnel systems. Hardware was not fielded to all units deployed; nor did all of the units which had hardware use it properly. And finally, communications were largely lacking during much of the operation. This chapter addresses each of these shortfalls in greater detail.

Functionality

Personnel units/elements found that they were still expected to support peacetime functionality. This was the case even though Department of the Army (DA) intended that

the continental United States (CONUS) sustaining base and Europe would perform the peacetime mission. There was never a transition to strictly wartime functionality for the units deployed in Southwest Asia.

Because the home stations were expected to provide peacetime support, the deployed units did not bring their Military Personnel Records Jackets (MPRJ). Those units which anticipated problems brought hasty personnel files with them containing only the critical information they felt they would need for personnel service support in the field. However, many units did not do this which made the task of providing continued peacetime support during the war difficult.

Two examples of required support for peacetime functionality by deployed units included retention processing and peacetime promotions (not to be confused with wartime, battlefield promotions). Both of these functional areas depended heavily on using the MPRJs which were not available in the theater. Personnel automation also did not prove to be a reliable source of the information. Consequently, retention NCOs and promotion clerks had to coordinate with their home stations to screen many records.

Units resorted to manual computations, often not having the required information to make correct assessments for accurate computation allocations.¹

This was compounded by the need to maintain all three components' (Active Army, Army National Guard, United

States Army Reserve) peacetime personnel policies and procedures, and not just those of the active Army.

Because of the expectation to maintain peacetime functionality, automation clerks had to keep up with the myriad of personnel transactions required to sustain many of the peacetime systems. This was still the case even after Headquarters, Department of the Army (HQDA) made efforts to reduce the number of transactions needed to be maintained by the field.² Clerks had to keep updated more personnel data elements than they would have if they had only to perform wartime functionality.

Automated personnel accounting and strength reporting during Operation DESERT STORM was based on units' peacetime authorized strengths, as opposed to their wartime required strengths. When actual hostilities began during Operation DESERT STORM consideration was given to begin managing against required (versus authorized) strength for deployed/deploying units.³ However, this proved impossible as the automated personnel systems had not transitioned to strictly-required-strength-accounting nor could these systems reflect both authorizations and requirements.

What made matters worse was that even the authorization data for the Reserve component was questionable, as far as completeness and accuracy.

The automated interface between the Army's system managing structure and the personnel management system did not work during DESERT SHIELD/STORM. At the installation level, for example, it was necessary to manually load more than 100,000 authorizations into the active personnel system....⁴

In many cases, however, mobilization stations did not even load the data due to lack of time and/or documentation.⁵

During Operation DESERT STORM automated personnel systems were largely only able to manage peacetime command alignments (the traditional relationship of units assigned to their parent commands). (For example, in peacetime, the 378th Personnel Service Company (PSC) is assigned to the 5th Personnel Group.) The field systems, or those systems maintained at HQDA, could not recognize multiple alignments.⁶ To continue the example, the 378th PSC might be attached temporarily to another command during mobilization, and, after deployment, to yet another. After redeployment, the 378th PSC would likely be reassigned back to its original parent unit, the 5th Personnel Group. This temporary realignment of command relationships is referred to as task-forcing. The Command and Control Strength Reporting System (C2SRS) did provide limited task-forcing capability to the field. HQDA even upgraded this capability during the operation.⁷ However, for the most part, units did not use it because of its complexity and inadequate design which made it unable to keep up with the massive and rapidly changing requirements.⁸ Consequently, personnel automated systems

during the operation did not provide adequate task-forcing capability.

Personnel systems and functionality were not supported by the timely deployment of personnel units. LTC Joseph L. Revell from the US Army Soldier Support Center deployed to Southwest Asia with the purpose of observing personnel operations. He explained:

In regards to Personnel Management problems within the theater, almost all can be attributed to two decisions and need to be highlighted. The first decision dealt with the lack of early deploying personnel units in the TPFDL [Time Phased Force Deployment List]. The need to project combat power without its supporting personnel systems had a expensive pricetag attached to it and degraded significantly the functions of strength accounting, replacement operations, postal operations, and finally, casualty operations. The second decision, or indecision, was whether or not this theater required a PERSCOM to orchestrate the personnel support for the theater.⁹

Many deploying units were on the ground for weeks before their supporting personnel units/elements arrived to provide their personnel support.

The theater PERSCOM structure was not even organized until four months into the deployment. This occurred for two reasons. First, it was determined that AG/personnel group assets from the XVIII Airborne Corps would provide the needed support within the theater of operations (at least until a second corps was fielded). Second, the delay in organizing a PERSCOM was also consequent to the decision to front-load combat elements for deterrence purposes. Most of the deficit

in structuring a balanced force existed at echelons above corps for combat support and combat service support units. There was no effort made in CONUS to compensate for the lack of a PERSCOM in theater. For example, a PERSCOM could have been set up at Fort McPherson. After a second corps deployed to Southwest Asia (VII corps in November 1990) the theater PERSCOM was organized (December 1990). Unfortunately, between November and December, in the absence of the theater PERSCOM, the small contingent of personnel assets initially deployed as part of the XVIII Airborne Corps was unable to keep up with their own expanding corps organization, let alone resolve theater level issues.¹⁰ When the theater PERSCOM was deployed/organized, it was done in a piecemeal fashion over several months, providing little direction initially.¹¹

During Operation DESERT STORM there was no single integrated personnel automated system. In accordance with established policies at the time, each of the three components maintained their own distinctly different systems. Even though Congress has not allowed for a single integrated system, there is still a need for at least a single source database with standardized data elements.¹² This database, already anticipated, is the Total Army Personnel database (TAPDB). Ultimately, TAPDB will aggregate the three component databases along with the civilian personnel database into a common source of total Army personnel

information. Unfortunately, this database is still emerging, and was not fully functional during the Operation DESERT STORM. Figure 5-1, below is a graphic representation of TAPDB.

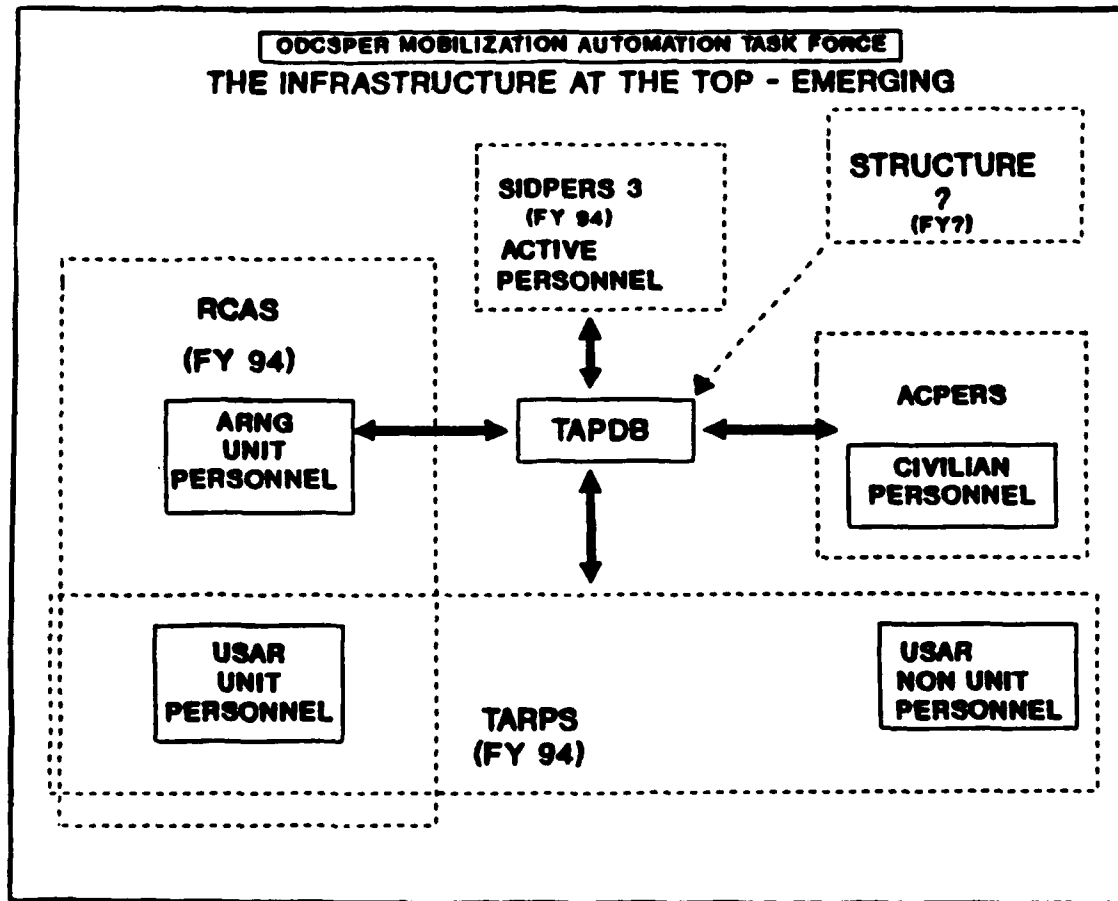


Figure 5-1

Software

Although the Total Army PERSCOM considered using SIDPERS-Wartime for deployed units, they made the decision to

continue using the peacetime system, SIDPERS-2/2.75. This decision was based primarily on the fact that the C2SRS software could not work with SIDPERS-Wartime. The software was only designed to work on the peacetime system.¹³ The Total Army PERSCOM further determined that both CONUS and Europe home stations would continue providing mainframe support to the deployed units. Maintaining the active component peacetime system was especially difficult for the activated reserve component units as they lacked training, experience, and many times the equipment necessary to make the active Army system work.

Unfortunately, SIDPERS-2 and SIDPERS-2.75 did not provide the essential data needed to manage the force at all echelons, nor could the software be changed easily.

SIDPERS-2 was developed in the early 1970's as a fixed length record/flat file system. Today, it is old technology. To modify or change it is very labor and time intensive. A simple change requires several months to modify programs, test them, and field the updated software.¹⁴

Operation DESERT STORM just did not provide the time to make all the needed changes. Consequently, personnel managers at all levels had to devise and implement work-around solutions.

Although C2SRS was available, many units improvised other means to account for personnel and provide strength reports. This was especially true of reservists who were largely unfamiliar with the software and whose first exposure to the software may only have been during mobilization.

Units did not always maintain their C2SRS battle rosters. As mentioned in chapter 4, the battle roster is the personnel accounting tool key to generating the C2SRS strength reports. If the battle rosters are not kept current, then the software cannot generate accurate reports. One division reported, "Battle roster programs and procedures were cumbersome and reliability was poor."¹⁵ Consequently, many units did not even bother maintaining the battle rosters or using the C2SRS software.

In the end, C2SRS just proved to be too difficult to use. The software was too complex. Soldiers needed to be very familiar with the software in order to use it effectively. This posed a problem for many units, especially for reserve units. Active Army units also lacked experience in using the software because they never used it except possibly during exercises.¹⁶

SIDPERS and, generally, most of the automated personnel systems which supported mobilization and HQDA, proved to be inadequate in providing timely and current information. There were many after action reports by units and personnel elements explaining that there were extensive delays in processing transactions to update SIDPERS and other personnel databases. Just a few examples are provided below to make the point of how serious this problem was.

(1) To begin with, reserve component units activated with old data. In fact, the mobilization personnel data was 60 to 90 days old by the time SIDPERS received it.¹⁷ The Mobilization Personnel System (MOBPERS) was supposed to preposition the accessioning data. The section entitled, Interfaces describes MOBPERS in greater detail.

(2) SIDPERS and other personnel automated systems did not receive accurate organizational data until three months after Operation DESERT SHIELD began.¹⁸ The Status of Resources and Training System (SORTS) was the source of this data. Any follow-on updating to SORTS also required excessive time. One major command reported that,

...the time lag between the date of exchange on the ground and updates in the SORTS system was so great that SIDPERS could not be used effectively at any level as the basis for managing the force.¹⁹

The section entitled, Interfaces describes SORTS in greater detail.

(3) The processing of transactions to support SIDPERS was also lengthy. At theater level it was reported that it took seven to ten days for transactions to update the theater database (once they had a theater database).²⁰ An office of the DCSPER reported that their data was historically 15 days old when they received the information.²¹ One division described their time delay to be as much as four-weeks-plus.²² One command even reported their time delay and the consequences in terms of months.²³

(4) There were many reasons explained for this time delay in processing transactions. The time lag between the actual event and the unit submitting the transaction was often lengthy.²⁴ In many cases, the transactions were being submitted in a timely manner, it was just that the CONUS sustaining base and Europe did not always get the transactions to process them. Consequently, units would have to resubmit their transactions.²⁵ All agree that there was a huge time delay built in by just having to deal with a sustaining base thousands of miles away. If a unit had to process its transactions through the mail, it could take weeks before they updated the database. Whatever the reason and however long the time delay was, is not so important as the consensus by all personnel managers that SIDPERS was never timely or current.

During the war, automated personnel systems did not adequately account for all categories of reservists activated and deployed. There was limited capability to do this at the top of the system.²⁶ Unfortunately, this capability was not designed into SIDPERS for field use.²⁷ Yet, commanders and personnel managers at all echelons needed to track the reservists by the categories under which they mobilized, which included: Active Guard Reserve (AGR), Retired Reserve, Individual Mobilization Augmentee (IMA), Troop Unit reservist (TPU), Individual Ready Reserve (IRR), Temporary Tour of Active Duty (TTAD), and RT-12 (released from active duty

within 12 months). SIDPERS did not provide that capability nor could DA change it rapidly enough to incorporate the functionality.²⁸

SIDPERS provided no capability to retain as a data element the reservists' original units with which they mobilized. Personnel managers used reservists as individual replacement fillers. They received new assignments, sometimes to active Army units. Law requires reservists to be released from active duty not later than the date their original mobilizing unit is demobilized. These reservists could remain on active duty only if they volunteered to remain on active duty in a TTAD status and with consent from the commander of their original unit.²⁹ Unfortunately, SIDPERS provided no means of tracking these reservists against the demobilization dates of their original units.³⁰

SIDPERS was not flexible enough to provide much of the unique information needed for personnel management purposes during the operation (of course, this was only due to the personnel community's lack of foresight in determining their wartime requirements prior to Operation DESERT STORM). SIDPERS was not flexible enough to identify soldiers who were deployed vs. nondeployed, soldiers who were affected by STOP LOSS policies, soldiers who were attached vs. assigned, or soldiers who were single parents.³¹ Many units reported the need for SIDPERS to identify soldiers in a TDY status or soldiers who were dual military couples.

There was also an interest in tracking some soldiers who were deployed directly from Training and Doctrine Command (TRADOC) schools so that they could be sent back for further training.³²

By January 1991 a deployment indicator (DPLI) code was added to SIDPERS for the field to use.³³ However, this code was not added till long after most of the units had been deployed and furthermore, the code could only be useful if all units had submitted transactions with their DPLI codes. Because the units largely did not do this, there still existed no real capability to distinguish deployed vs. nondeployed soldiers.³⁴ Furthermore, SIDPERS did not include data elements indicating why a soldier was nondeployable, if the condition was temporary or permanent and, if temporary, when they would become deployable.³⁵

Naturally, units improvised ways to account for these different categories of soldiers. They came up with SIDPERS work around solutions. They built their own databases using off the shelf software packages. And, in many cases, they resorted to manual means.

Initially, personnel automation failed to provide strength roll-up capability to echelons above division (EAD). Later, a roll-up capability was fielded. The Soldier Support Center (later assisted by the Total Army PERSCOM and the Software Development Command - Washington³⁶) deployed the

Corps Prototype Software (CPS). Both the XVIII and VII Corps used this software during Operation DESERT STORM.³⁷ This extract database program started with only 21 data elements but grew to 64 data elements by the end of the conflict.³⁸

Unfortunately, this new capability proved only marginally successful. It failed to be responsive to the needs of the system users.

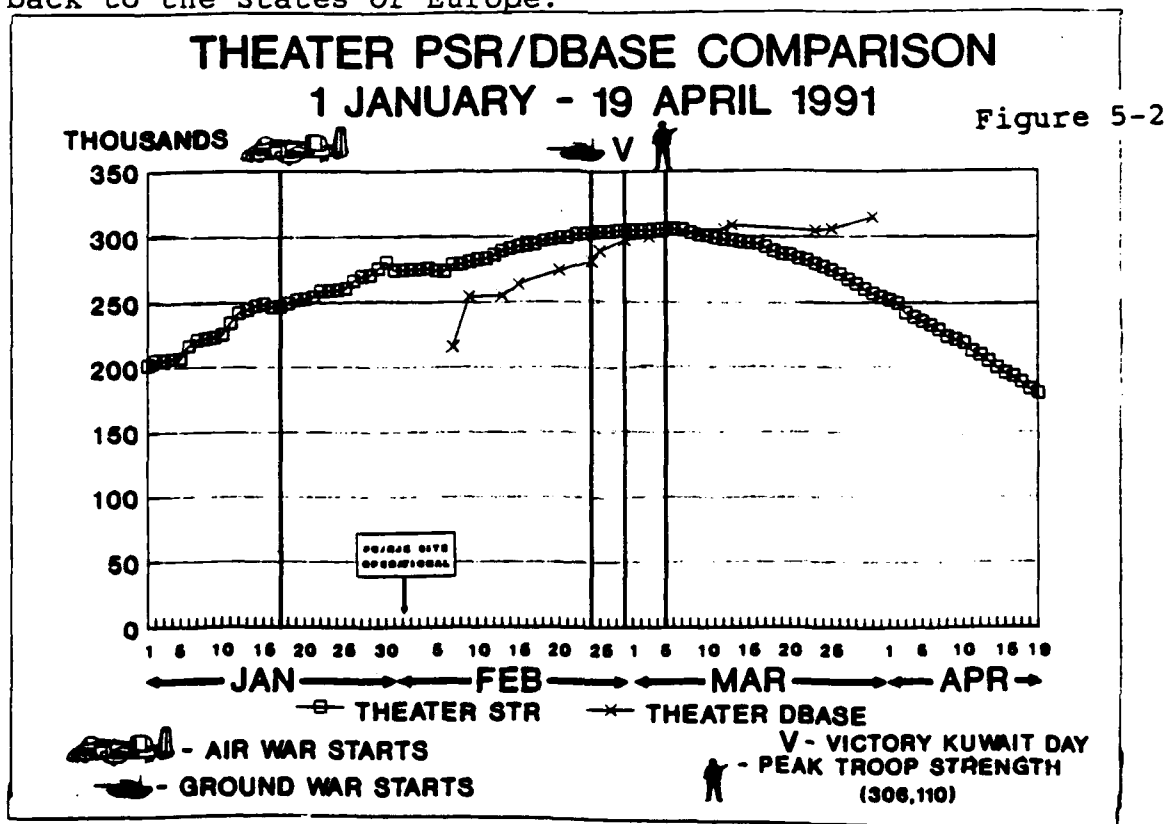
The SIDPERS extract system failed to provide timely response times to database queries at Corps and Theater. Even with the abbreviated database extract at EAD/Corps/Theater (64 data elements), response times to queries were running up to 2 1/2 hours on a B-38 PC [TACCS-Enhanced equipment] with its 386-chip, 20 Mhz processing capability.³⁹

At the theater level, matters were complicated by the decision by HQDA not to have a database at theater processing SIDPERS. DA made the decision because Army Forces Central Command (ARCENT) in Southwest Asia did not want the burden of keeping up a peacetime system (which might necessitate shipment of personnel records to personnel units in theater) and because the CONUS installations and Europe were already providing mainframe automation support.⁴⁰ This decision was made with the full understanding that the capability did exist with the 344th Data Processing Unit (DPU) to process SIDPERS in theater.⁴¹ The 324th DPU was also capable of processing SIDPERS in theater.⁴²

By the end of the war the theater did establish a database with roll-up capability (not to be confused with

SIDPERS processing capability) using the Soldier Support Center extract database program. Nevertheless, this provided the theater with only rudimentary strength management capability. Later, to support the residual force after the war, a SIDPERS personnel processing activity (PPA) was established in the theater and included connectivity with CONUS for mainframe support.

Figure 5-2, below, shows the timeline for the establishment of the theater database. Note that prior to February 1991 there was not a theater database at all. And it was not until March 1991 that the theater was able to completely account for the force. The theater database was fully functional just as units were beginning to redeploy back to the States or Europe.



Interfaces

The SIDPERS interface with the Mobilization Personnel System (MOBPERS) did not allow the necessary flexibility needed to support mobilization. MOBPERS did pass prepositioned skeletal accession data to mobilization stations. However, mobilization stations encountered three primary limitations. First, they had to "handjam" accession data for soldiers mobilized at other than their doctrinally defined mobilization stations. Second, SIDPERS could only use MOBPERS data when accessioning an entire unit or a soldier by personnel mobilization code. Third, the MOBPERS data proved to be insufficient for accession/personnel management purposes.⁴³

Much of the MOBPERS data was not current and had to be keyed manually into SIDPERS. For example, there were outdated specialties and additional skill identifiers. Skill levels and grades did not always match.⁴⁴ Furthermore, additional data, like basic branch, had to be manually keyed into SIDPERS.⁴⁵ Consequently, mobilization stations kept very busy trying to ensure that they properly accessioned the mobilizing reservists into SIDPERS.

During the entire operation, the use of derivative unit identification codes (UICs) became an improvised means for activating, deploying, and accounting for portions of units. The only approved source for unit level organization

data for automated personnel systems is the Status of Resources and Training System (SORTS). Units are registered in SORTS and tracked through the personnel systems by UICs. Early in deployment, Forces Command (FORSCOM) determined that in some cases only portions of some reserve units should be activated as the units' full capabilities were not needed. Consequently, HQDA approved the mobilization of partial units by creating derivative UICs.⁴⁶ This approach was later used for rear detachments to distinguish them from the main body of the units deployed. In Southwest Asia, derivative UICs were also used for medical/replacement holding purposes.⁴⁷

Initially an automated interface did not exist between SIDPERS and postal operations. Postal units had an impossible mission of tracking people for much of the operation without the benefit of an automated postal locator and interface with SIDPERS.

The direct and general support postal units arrived in theater without authorization for hardware and/or software needed to redirect mail. The equipment required is not part of their TO&E [Table of Organization and Equipment] or postal equipment. Without an established theater data base linkage or the means to build their own, the redirect mission quickly grew beyond the ability to respond....The Army needs a system to account for individuals in the AOR [Area of Responsibility]. The system needs to be available to postal units and in a format they can use to find individuals and build units schemes to support their redirect mission.⁴⁸

Of course, SIDPERS was that Army system which was supposed to account for individuals and an automated postal locator would have provided the format postal units needed to accomplish

their redirect mission. In fact, later in the operation, hardware and programing support was provided by Total Army PERSCOM and the 344th DPU for this purpose. They established an automated postal locator and interface with the theater database providing a long awaited relief for the postal community.⁴⁹ In any case, with the volume of mail approximately 2 1/2 times historical planning figures, it is amazing postal operations worked as well as they did using, for much of the operation, primarily manual methods and procedures.⁵⁰

An Automated interface also did not exist between SIDPERS and the Theater Army Medical Management Information System (TAMMIS). This interface might have been beneficial in accounting for soldiers evacuated to the hospitals.

The status and accountability for casualties was largely lost when medical personnel evacuated them to hospitals.

Once a unit evacuates a casualty to a medical unit or when treatment begins, the parent unit S-1 and G-1 personnel channels are no longer able to track the progress or location of their unit member. Telephonic, radio traffic, or personal visitation by CDRS, 1SGs, S-1s, ET AL, are required. There is little hope of successfully obtaining timely, accurate information and data on the patient.⁵¹

This lack of accountability for the soldiers in the hospitals was even further complicated by the number of treatment facilities servicing the soldiers.

The battalion experienced some difficulties in accounting for personnel undergoing treatment at

various evac hospitals and related facilities. The problem was compounded by the sheer number of facilities located in our support area. In instances where unit members were attached forward the parent unit was not always able to be notified when an individual soldier was injured and/or taken to a medical facility. The process of checking individual facilities by phone is tedious at best.⁵²

The medical community often evacuated soldiers completely out of Southwest Asia without commanders or the home stations even knowing.

Soldiers who were injured or developed medical problems in Southwest Asia were routinely MEDEVACed [medically evacuated] to USAREUR [US Army Europe] with no notice to the Rear Detachment. Once a soldier left the unit, he/she was managed through medical channels. Soldiers not critically injured returned to USAREUR without the Rear Detachment or Community being aware of their status.⁵³

Eventually personnel units had to locate liaisons at the different hospitals to intercept the soldiers being admitted and then report their status through personnel channels.

An interface between SIDPERS and the medical information system may work for future conflicts but in reality the interface would have done little to help during Operation DESERT STORM. "TAMMIS...was only operational in one theater hospital and therefore was not effective."⁵⁴ Fortunately, there were few casualties. Nevertheless, there was the potential for large numbers of casualties to have made casualty accountability by the personnel community a serious problem.

Operation DESERT STORM demonstrated a need to account for civilian personnel deployed to the theater. As it turned

out, there was no automated system to account for them while they were deployed.

...a capability must be developed to support civilians after deployment, either through a deployed version of the civilian system or as an adjunct to the military system.⁵⁵

If DA determines that civilian accountability will be maintained by the military personnel system (SIDPERS), then an interface with the peacetime Automated Civilian Personnel System (ACPERS) would be beneficial. However, in the short term, it would probably be easier to deploy the ACPERS system, rather than make massive changes to SIDPERS.

Operation DESERT STORM also demonstrated the need to relook the interfaces that exist between those systems designed to manage structure and the military personnel management systems. Earlier in the chapter, the functionality issue of authorized and required strength accounting was addressed. The interface between The Army Authorization Document System (TAADS) and the personnel management systems like SIDPERS made this functionality possible. Unfortunately, this interface just did not allow the needed flexibility for less than full mobilization. SIDPERS needs to be able to select individual units being mobilized and update the database with their authorized or required strength.⁵⁶

The automated interfaces that exist between the Army's system for managing structure and the personnel management system did not support DESERT SHIELD/STORM. These interfaces must be modernized....A major effort will be required to examine

the existing automated interfaces and develop a new set of functional requirements.⁵⁷

Hardware

All the Army units deployed did not use TACCS. This was especially true of reserve units. Reserve component units were placed at the end of the fielding schedule, behind the active component units. At the time of the war, only 28% of the reserve units had TACCS.⁵⁸

Moreover, the Army's decision to stop further procurement of the TACCS has left hundreds of reserve component units in the inventory without the basic tool required to plug into the Active Army personnel system.⁵⁹

What compounded the low fielding percentage even more was that before Operation DESERT STORM the fielding of TACCS had been to the wrong units. For the most part, the RC units deployed were combat support and combat service support units while only RC combat arms units had received TACCS.⁶⁰

Reserve units were not fully trained on TACCS, or on the SIDPERS application for the TACCS. Those units which were fortunate enough to have TACCS before Operation DESERT STORM did not use the equipment regularly and, consequently, the training they once received was lost.

Reserve Component units that have TACCS equipment only received...training during initial extension of the TACCS to the unit. It appears proficiency was lost after this first training period. Several RC units required retraining...before deployment. The training conducted prior to the DESERT SHIELD deployment was on unit TACCS equipment. However, in many cases, the equipment wasn't available because it was being prepared for shipment.⁶¹

Because many of these TACCS equipped reserve units mobilized at non-TACCS equipped mobilization stations, getting any kind of refresher training was impossible. Unfortunately, all efforts to provide training during the war proved largely ineffective.⁶²

Many units did not like the TACCS hardware. It was generally despised for its size. The keyboard is not standard. And it is old technology. Generally personnel units would like to see the Army transition to lap top hardware with MS DOS compatibility.⁶³ Otherwise, they would rather use their own off the shelf commercial hardware and software.

The corps and theater levels did not use CTASC IIs. This was only because the equipment had not yet been fielded to the personnel units requiring the equipment by doctrine. CTASC I equipment was available at the theater level and it also came equipped with the SIDPERS software, however, it was never utilized either for SIDPERS processing or to provide the theater with its own strength management capability.⁶⁴ Instead, both the corps and theater levels used TACCS-Enhanced equipment late in the operation to provide rudimentary roll-up capability and strength management functionality. Although the TACCS-Enhanced equipment provided enhanced data storage and processing capability over the TACCS, it still was not sufficient for timely processing at the corps and theater levels.⁶⁵

Communications

Probably communications varied the most from personnel doctrine. Most units and personnel elements did not have the capability to transmit data electronically. This was probably most true of the combat service support and reserve units.

Many units had only one tactical radio in a company of 120 personnel. Additionally, the percentage of fill of tactical radios and voice secure equipment was under fifty percent. The percent of fill for reserve component units was even less.⁶⁶

Furthermore, tactical communications equipment needed to be dedicated for just personnel reporting and data transmission.

SIs need a dedicated radio capability to transmit strength data to the brigade S1 and casualty data to the PSC in the DSA [Division Support Area]. Communications between the Brigade S1 and PSC as well as the G1 and PSC are also required.⁶⁷

Without tactical communications equipment, units and personnel elements resorted to whatever means possible to pass on their personnel data and strength reports to the higher echelons within theater.

With no internal communications capabilities, personnel strength accounting was difficult to impossible. The host nation telephone system did not allow a direct call from the Headquarters to portions of the unit located elsewhere in the country. Valuable time was wasted relaying calls through various locations to obtain or transmit information.⁶⁸

In fact, even the transfer of data by way of courier was difficult due to long distances between units. Battalion SIs in combat trains were 50-200 km ahead of their PACs in the

field trains. PSCs were usually too far behind to communicate with supported maneuver units. Couriers were impractical and untimely.⁶⁹

Because CONUS installations and Europe provided peacetime mainframe support to the units deployed, personnel service companies had to send their SIDPERS transactions back to CONUS/Europe. This too they accomplished by whatever means possible to include: mail; telephone; courier; and, if lucky, data communications. Unfortunately, dealing with the support base thousands of miles away proved very difficult, for some personnel units almost impossible. An illustration of the Operation DESERT STORM communications flow is at Figure 5-3 below.

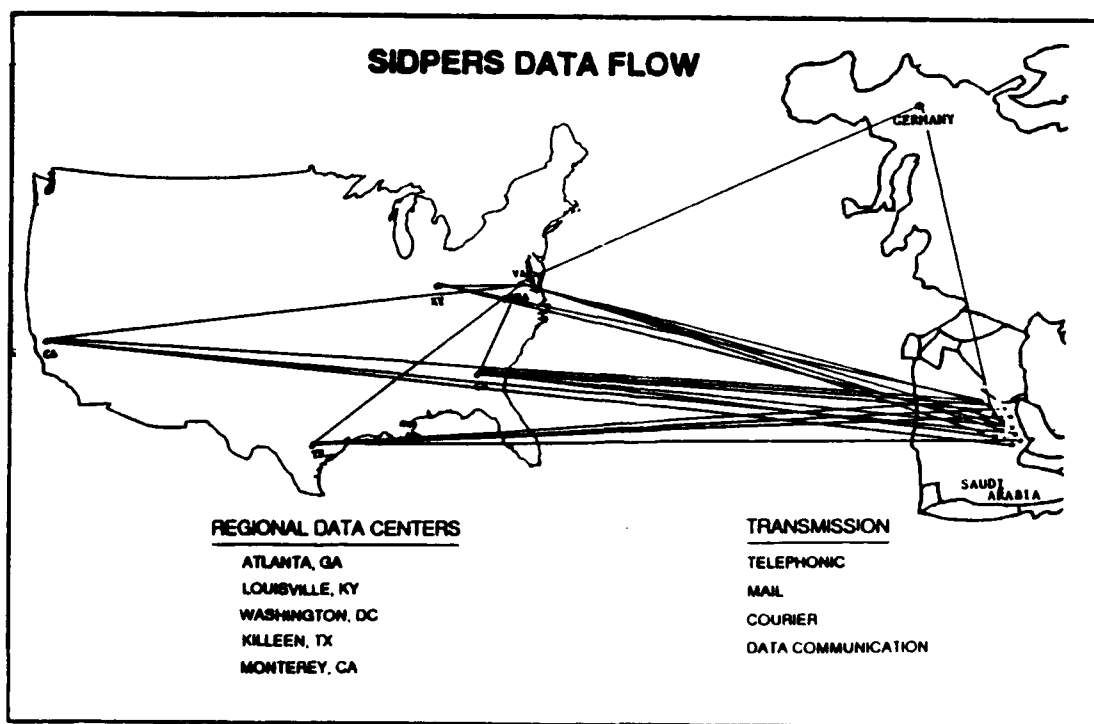


Figure 5-3

For the most part, data communications between Southwest Asia and CONUS had to be patched together. Initially, tactical communications could not be transmitted through the Defense Data Network (DDN). The Personnel Information Systems Command (PERSINSCOM) and in-theater signal assets installed "BLAST" DDN software enabling TACCS to TACCS communications between XVIII Airborne Corps and Ft. Bragg.⁷⁰ Signal assets and PERSINSCOM also installed remote job entry stations for satellite transmission of data from theater back to CONUS.⁷¹ The data communication flow that was finally followed late into the operation is illustrated in Figure 5-4 below.

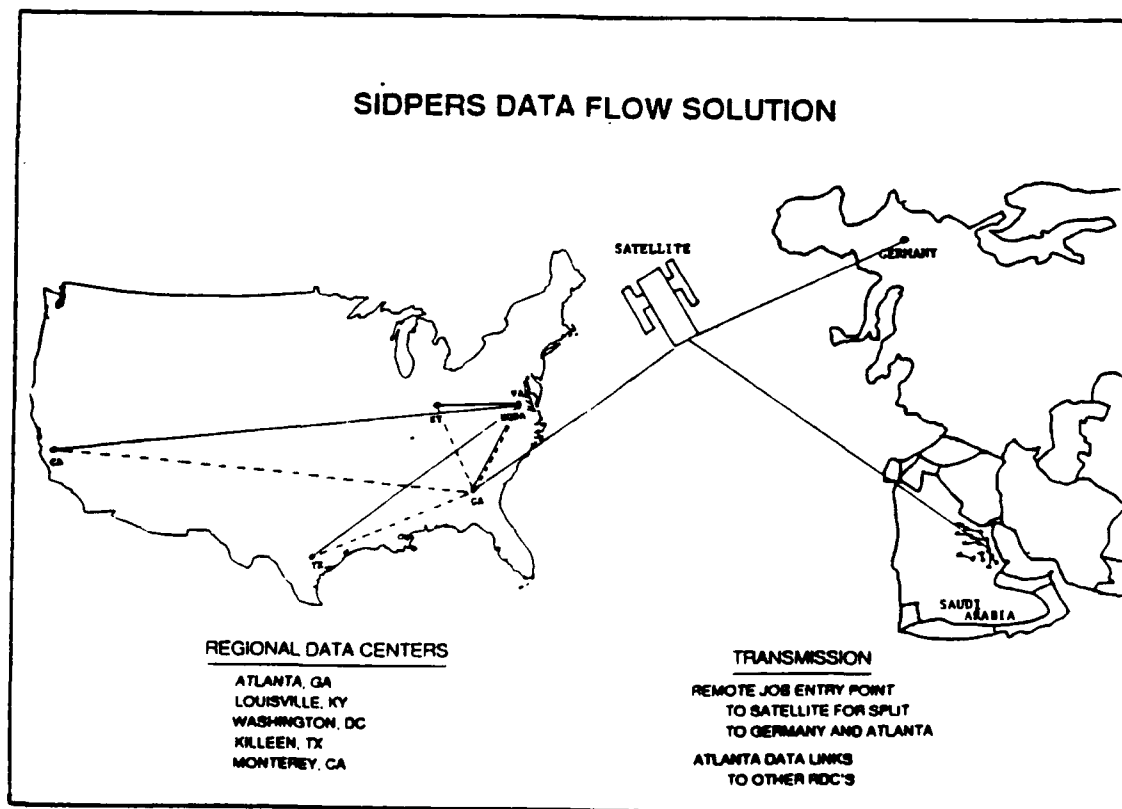


Figure 5-4

Chapter 5 Conclusions

During Operation DESERT STORM the personnel community did not always follow doctrine. Much of the time they just could not implement it. Functional expectations were very demanding on the personnel community. The software proved largely inflexible, untimely, difficult to use, and unable to track all categories of soldiers. Many critical interfaces were either nonexistent or they did not fully support the needs of personnel managers at all levels of the Army. The hardware was not fully fielded and where it was, it was not always used. And finally, communications were scarce and had to be patched together. In order for units and personnel elements to make personnel accounting and strength reporting work at all they had to improvise variations from doctrine.

Naturally, problems resulted with each variation from doctrine. So significant were some of the problems that it is questionable whether the personnel community ever had control over personnel accounting and strength reporting during the war. Certainly, it will take the Army many months, or even years, to fully recover from the ill effects of personnel automation during the war.

CHAPTER 5

ENDNOTES

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⁵CALL, JULLS Number: 60344-15290 (00007).

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CHAPTER 6

IMPACTS FROM NONCOMPLIANCE WITH DOCTRINE

This chapter describes the consequences of noncompliance with doctrine. There were many problems that resulted from the personnel community's inability to satisfy doctrinal expectations. In many cases the doctrine just could not be implemented. The disconnect between actual practice and doctrine resulted in serious backlogs, increased workloads, extensive processing delays, lost accountability, noncurrent data, inaccurate data, system nonresponsiveness, reporting inconsistencies, ineffective personnel management, and of course service delays to the soldiers. This chapter addresses each of these impacts in greater detail.

Functionality

Department of the Army decided not to implement wartime doctrine by requiring the continuation of peacetime procedures and policies during the Gulf War. This resulted in an added workload for personnel units/elements in Southwest Asia at a time when their focus should have been only on wartime functionality. In fact, personnel units/elements had to support wartime functionality, peacetime functionality, and the peculiarities of all Army

components (Active Army, Army National Guard, US Army Reserve), while also having to keep up with all the units on the move and their constantly changing command alignments. One brigade S1 explained that they found they had to do more with less and in less time.¹

Problems were further compounded by having to deal with a sustaining base, located thousands of miles away, which made coordination extremely difficult. In many cases it was next to impossible. The impact on the promotion system alone was especially tragic.

The system used to process promotions was cumbersome and labor intensive....The processing took up to 90 days. It often required extensive transcontinental communications between the PSC and their rear detachment....²

One major command, concerned with the impact of this delay in processing promotions, explained:

The recovery period needed to fix the promotion system and restore the quality of personnel information can now be expected to take several months. A number of soldiers will probably never recover lost time in grade, pay, and documentation.³

Active component (AC) personnel units also expressed difficulties in dealing with reserve component soldiers on active duty. They found it difficult to provide them with the level of personnel service support they deserved. Dissatisfied with the support to the reserve component, the theater reserve component (RC) liaison office explained,

PSS for the RC in the theater was totally inadequate. It was as if the AC leadership abrogated any responsibility to RC soldiers in this regard.

RC personnel units were placed in general support under AC direction and devoted little attention to RC-specific problems....To ignore the PSS needs of a third of the force is lunacy. The long-range consequences of this serious short-sightedness will be difficult and expensive to overcome.⁴

Having to support peacetime and wartime functionality as well as all components, and under difficult circumstances, not only created a heavy workload for personnel units/elements, but it added to their inability to operate effectively. They just could not support all their requirements and do any one of them justice. With so much to do, they were distracted from performing their most important responsibilities, their wartime functions.

The decision to manage the force by authorizations, as opposed to required strengths, created serious problems for the personnel community and the ability of automation to support personnel accounting and strength reporting.

Automated authorization data for reserve component units was not available. The automated interface, MOBTAADS [a subset of TAADS used to integrate mobilizing units into the active Army] was unable to convert from a requirements base to an authorization base. Thousands of manhours were expended to manually load authorization data at the MS [mobilization stations]. In many instances, however, the data was simply not loaded for lack of time and/or documentation. Because of this major shortcoming it was virtually impossible to get visibility on aggregate authorizations in the echelons above the division.⁵

Vertical The Army Authorization Document System (VTAADS) supplies authorization data for only active Army units, not for reserve component units. Mobilization The Army

Authorization Document System (MOBTAADS) supplies only required data for all Army units.⁶ The decision to activate reserve units at authorized vs. required strengths forced the mobstations to load the data manually since it could not be supplied by either VTAADS or MOBTAADS. This manual loading of data created a heavy workload requirement on the already overtaxed mobilization stations. Also, because the data loaded by the mobilization stations was not always complete, it seriously impacted the accuracy of the personnel data bases.

Matters were made worse because initially there was no guidance as to what level of authorized manning was required for deployment. "This wreaked havoc in the field, as FORSCOM cross-leveled across MACOM [major commands] without DA guidance."⁷ Consequently, units received personnel fill and were deployed at different levels of authorizations from ALO 1 (the wartime required strength) to ALO 3 (a considerably lower authorization level).⁸ Unfortunately personnel units/elements in Southwest Asia had to manage personnel strengths by the obvious inconsistencies in the authorization levels for the different types of units.

Without task force accountability, automated personnel systems provided little value to the battlefield commander. Units committed to battle usually went as part of a task force. Commanders needed to be able to rely on

personnel managers for the personnel status of each task force. This information was vital for the purpose of supporting tactical decisions. Without task forcing capability within personnel automation systems, personnel managers had to resort to more time consuming means to provide the information to their commanders. Commanders were not happy with these delays and seeming lack of responsiveness by the personnel community. Reasonable demands by commanders for routine personnel information could not be met. In fact, personnel managers did not satisfy all requests properly.⁹

The delay in deploying personnel assets to the theater also had a serious impact, not only on automation support of personnel accounting and strength reporting but also on other personnel functions. With regard to combat service support (CSS) units (among which are personnel units) it was reported that serious backlogs developed because the CSS units were not in the theater to manage and handle the deployment flow.¹⁰ Personnel units/elements, because they were often not in theater to support the deployment, had to prepare transactions covering past events/accountability when they did arrive in theater. Personnel units/elements had to play catch up to regain accountability of the force. According to JULLS reports, the late deployment of personnel units/elements directly contributed to many of the personnel service support (PSS) problems experienced, including

problems in strength management, postal operations, and replacement operations.¹¹ Late deployment of personnel units/elements especially affected personnel accountability as reflected in the following statement:

...failure to deploy a supporting personnel element early in the deployment...further degraded the accuracy of personnel accountability....The personnel accounting system never fully recovered, resulting in strength management and top-of-the-system reporting delays throughout the deployment.¹²

Overall, the consequences of the late deployment of personnel assets were excessive backlogs and lost accountability from which the personnel community never recovered. Personnel databases were inaccurate and accountability for the force was never complete.

Serious difficulties occurred in personnel functionality in general, due to the late deployment/organization of the theater PERSCOM. Theater policies and standard procedures were badly needed for all personnel functional areas including personnel accounting and strength reporting.

Theater-level direction of the military personnel management system was especially weak during the early, critical months of the operation primarily because the Personnel Command was, for all practical purposes, nonexistent. The small contingent of personnel initially deployed as part of the Support Command were unable to keep pace with or resolve theater level issues.¹³

By the time a theater PERSCOM was fully operational personnel functionality had suffered immensely.

By the time the theater PERSCOM was in theater and organized to execute its missions, postal

operations were completely overwhelmed, no casualty reporting system was in place, and no assistance had been provided to streamline theater replacement operations.¹⁴

Personnel units/elements expressed the need for a fully integrated automated personnel system between all three components many times. Lack of standard data made the transition to the active component SIDPERS very difficult for the reserve component. Reservists also had a corresponding difficulty working with the active component SIDPERS because their own automated personnel systems were vastly different.

The absence of a single, modern, and integrated personnel information management system for use in managing the total force degraded the personnel readiness decision process and severely taxed the personnel community at installation, CONUSA [Continental United States Army], FORSCOM, and HQDA level.¹⁵

Even though a fully integrated system may never be possible, a single source database (TAPDB) with standardized data elements is possible, and would have eased mobilization considerably during Operation DESERT STORM had it been fully operational.

Software

Maintaining the SIDPERS peacetime system proved difficult for personnel units/elements assigned in support of Operation DESERT STORM.

Automated peacetime strength management systems were unable to meet the demands of personnel readiness....For the most part, strength managers at all levels were forced to revert to labor intensive, manual systems of questionable accuracy.¹⁶

Also, when HQDA decided not to go to SIDPERS-Wartime, they forced personnel units/elements to keep up with many of the peacetime SIDPERS transactions that had to be sent/transmitted/coordinated with the sustaining base. The personnel community:

...was forced to manage a cumbersome data disc processing system, involving mailing or transport by courier of all SIDPERS data discs to CONUS. This system is unsatisfactory from a soldier support standpoint, and results in late promotions and other important soldiers actions which directly impact on troop morale.¹⁷

Consequently, the primary results of the decision to maintain peacetime SIDPERS were increased workloads and extensive time delays in processing data transactions.

Although the TACCS C2SRS software was available, many units relied on other means to satisfy personnel accountability and strength reporting requirements. This was especially true of reserve component units. Of course, this led to a lack of standardization and inconsistencies in reporting.

The results of this undiscipline in the personnel system were inconsistent accounting for personnel and documentation of units authorized strengths. These inconsistencies adversely impacted both the deployed force and the top-of-the-system databases...Allowing field commands to build "roll-your-own" personnel systems on-the-fly will result in the same inability to do the job in a consistent, coherent manner for the next deployment.¹⁸

Overall the C2SRS software proved to be ineffective. It was too complicated for soldiers to use. Consequently, there was little or no benefit derived in terms

of time savings and accuracy. One positive thing which came from its use during the war was experience based knowledge of how to fix it.

The lack of timely and current data processed through SIDPERS effected many personnel functional areas. This is probably no better exemplified than with promotions.

Since finance is directly linked into the SIDPERS system, the most significant problem encountered in this process was the promotion of Private First Class to Specialist. Once the submission was made, it would take several months before the soldier saw a pay raise. Each month that the pay raise wasn't there resulted in a pay inquiry by the soldier.¹⁹

Another good example was the assignments process. Crossleveling/assignment/replacement decisions were often based on the latest automated strength reports and personnel requisitions (personnel requirements reports). If the data was not current then decisions may not have been appropriate. Some units may have been given too many replacements while others units, desperately needing relief, may have been without. Many other personnel functional areas were similarly affected by the lack of timely and current SIDPERS data.

The inability of SIDPERS to track all categories of reservists, activated and deployed, had a devastating impact on support to these soldiers. The theater reserve liaison office described the impact best,

The absence of accurate personnel and unit accounting data plagued nearly every facet of theater

operations and affected the majority of deployed RC PSS functions. Major morale issues such as mail delivery and timely Red Cross notification of family emergencies were sometimes nearly impossible to resolve for individual RC soldiers and their families because the soldiers couldn't be located. Failure to track accurately the location of IRR [Individual Ready Reserve] soldiers and individual TTAD [Temporary Tours of Active Duty] volunteers resulted in serious difficulties as theater commanders attempted to redeploy them within the time constraints established by Department of the Army. "Ghost hunting" expeditions were organized to locate these soldiers whose whereabouts had been obscured through a series of "VOCO" transfers. Rudimentary personnel support for these RC soldiers was nonexistent.²⁰

Because SIDPERS provided no capability to retain as a data element the reservists' original units with which they mobilized (and to which they had to be restored to demobilize), personnel units/elements had to resort to labor intensive means to capture this information.

If the soldier is reassigned, their RC unit can be deleted from SIDPERS, thereby requiring manual screening of records to identify the unit.²¹

This really became a challenge as many reservists were reassigned and many of their records had to be screened, if their records could be located at all.

Without responsive and flexible automated systems, it became guesswork for personnel managers when it came to making assignment and crossleveling decisions. There was information that the automated systems could not provide which should have been considered when decisions were made. For example, identification of dual military couples may have been helpful in making mobilization decisions.

Another example deals with nondeployable soldiers. Had a data element existed which showed the status of a soldier for deployment, then, once the impediment had been removed, he/she could have been sent to Southwest Asia. During Operation DESERT SHIELD/STORM these soldiers had to be tracked by labor intensive manual means.²²

Similar consequences could be identified with regard to other unique informational requirements of the operation. What really was unfortunate was that the Army was able to make some fixes (example: Deployment Indicator Code in Jan 91) but the field, many times, failed to implement the changes. The most important thing to understand from all of this is that because of the inflexibility of personnel automation, decisions affecting people's lives were often made in the dark without the benefit of sometimes vital information.

Unfortunately, for much of the operation (not until February 1991) the corps and the theater levels were not able to perform the most basic automated strength management support because they lacked an automated role-up capability. This seriously impacted the effectiveness of personnel management at both of these echelons. Until databases were established, the corps or theater PERSCOM had no really accurate way of accounting for the force, let alone managing it. Even after databases with roll-up capability

were set up, significant problems were encountered with moving the data to the higher echelons.

This situation resulted in missing, extensively delayed, inaccurate, and incomplete information at brigade and higher levels....²³

Interfaces

Two major impacts on the personnel community came from the inflexibility of MOBPERS and its interface with SIDPERS. First, because many reserve soldiers and units reported to other than their doctrinally defined mobilization stations, automation clerks spent countless hours keying in accessioning data into SIDPERS. This was further compounded by these clerks also having to correct what MOBPERS data had been successfully added to SIDPERS. Second, the data that was transferred through the MOBPERS/SIDPERS interface was insufficient for personnel management decisions. Consequently, this left personnel managers without access to the full amount of information they needed to make appropriate assignment/crossleveling/replacement decisions. Because of these problems encountered with this interface, the Army never did have full accountability of reservists on active duty making management next to impossible at places like Total Army PERSCOM and the Army Reserve Personnel Center (ARPERCEN), not to mention within the theater of war.²⁴

Although the SORTS/SIDPERS interface allowed for the use of derivative UICs for accounting for portions of units, this improvisation also had its drawbacks. The theater reserve liaison office reported,

Derivative unit identification codes (UIC) were used to gain access to individuals within the unit structures and stay within the current "cap." Soldiers caught up in these ill-conceived "remedies" became victims to every possible personnel and pay malady.²⁵

The Desert STORM Special Study Project at Ft. Leavenworth reported to a general officer steering committee the following concerning derivative UICs:

Because other Army management systems [other than SIDPERS] did not recognize the derivative UIC, serious personnel, pay, and logistics problems resulted. Future contingency operations, particularly under the restrictive 200K callup provisions, may again require the activation of partial units. To preclude the problems encountered in this operation, the Army must identify those units most likely to be activated in increments and document those increments and the associated UIC in MOTE/TDA.²⁶

Without a fully functioning SIDPERS interface with postal operations throughout the operation, the workload for postal units intensified as they attempted to perform their mail redirect mission. This was seriously compounded by the fact that there was an absence of postal units in the force structure. Because automation tools were not used for much of the operation, the redirect mission quickly grew beyond anyone's ability to respond.²⁷ This resulted in serious delays in mail delivery, concerned family members

back in the states, and soldiers in Southwest Asia wondering if their mail would ever catch up with them.

The lack of an effective interface between SIDPERS and medical operations also created problems. Accountability was lost for soldiers evacuated as casualties. Time consuming efforts were made to locate evacuated soldiers. Placing soldiers as liaisons at the different hospitals proved to be an expensive solution as those soldiers were also needed in their personnel units/elements. Furthermore, the credibility of the personnel community to account for casualties was seriously tarnished.

In many instances soldiers would gain access to a phone and tell their spouses they were in USAREUR (US Army Europe]. These spouses would in turn blame Rear Detachments for withholding information from them. Credibility of the Rear Detachments suffered severely.²⁸ In most cases the Red Cross was not involved.

Fortunately, there were few casualties during the war.

Because there was no automated system designed to track civilians deployed to Southwest Asia, accountability for the civilians could only be accomplished through manual means, if it was accomplished at all. This lack of an automated system to account for civilians during the war has been recognized by the highest levels of the Army. Efforts are now underway to correct this deficiency/oversight.²⁹

The interface between SIDPERS and those systems designed to manage structure did not support the operation and consequently seriously impacted the personnel community's efforts to manage the force.³⁰ The force structure systems were designed to support either a peacetime or total war/full mobilization scenario. Operation DESERT STORM did not fit into either one of these scenarios. Specifically, the interface between SIDPERS and The Army Authorization Document System (TAADS) did not have the flexibility to allow for less than full mobilization. The end result was that many of the units supported the war with only peacetime authorizations, when in fact many of them needed to be at higher strength levels to adequately support the war effort.

Hardware

Because many of the reserve units did not have TACCS equipment, a great deal of time and effort went into integrating these units into the active Army automated personnel systems. A corps support command reported,

This required a massive effort to obtain TACCS equipment for those units without it, to train unit personnel on its use, and to manually input names and unit information into the data base.³¹

Those units unable to get the TACCS equipment had to resort to other means to account for their personnel, perhaps with other automation equipment or more likely by manual means.

Even though many reserve units received TACCS training, for the most part, they still had no idea how to

operate their equipment. What training they may have had was very limited. The Total Army PERSCOM reported,

Last minute efforts to provide TACCS and associated training proved to be a quick fix and ineffective in the long term.³²

Consequently, most of our reserve units that had the TACCS did not use them. This seriously affected data accuracy and overall personnel automation support.

Every unit needed to use their equipment for any hope of having a fully automated personnel system throughout the theater. But because many units either did not have TACCS or did not use their TACCS, data was not always updated. Consequently, the data accuracy at the different reporting levels was always suspect.

The corps and theater levels were impacted by the lack of CTASC II equipment. As indicated in Chapter 4, doctrine requires the use of CTASC IIs at the corps and theater levels. Unfortunately, this equipment was not fielded to either level for use during the operation. Because of the enhanced processing and storage capability over TACCS, TACCS-Enhanced equipment was used at both corps and theater levels. Yet this too proved inadequate for the huge amounts of data that had to be processed. Queries just took too long, making the system not as responsive to the system users as is needed at those levels.³³ Although the TACCS-Enhanced equipment filled the void, CTASC II equipment still needs to be fielded to the corps and theater levels,

hopefully before the next major conflict. In fact, the personnel community must also seriously consider whether CTASC II will provide the needed capability.

Communications

Inadequate tactical communications and unplanned for transoceanic data communications resulted in the field commanders and the Army leadership not having timely visibility on needed information. Doctrine only required transoceanic data communications between the theater PERSCOM and the Total Army PERSCOM. Yet, during Operation DESERT STORM many personnel units/elements, besides the theater PERSCOM, had to pass transactions back to their home base installations (none of this requirement was doctrinally planned for, creating a serious communications overload requirement on the signal community). Since it was difficult for personnel units/elements to transmit/transfer data between echelons within theater and between theater and CONUS/Europe, then personnel updates were not always being made in a timely manner, if at all.

This lack of adequate communications impacted personnel accounting and strength reporting as well as all functional areas. The Soldier Support Center explained,

The lack of adequate communications hindered critical replacement, strength management, personnel accounting, strength reporting, and casualty functions.³⁴

Without adequate communications then data could not be utilized and processed by the various personnel functional areas which completely rely on the information.

A monumental effort was made by DA and the signal community in theater to correct the communications problems between corps/theater levels and the CONUS/Europe home base support. By February 1991 they were successful in fixing the transoceanic communication problems. Yet, these efforts did not come soon enough.

In addition to the lack of hardware and software the Army did not deploy an electronic link to the regional data centers to transmit and receive critical personnel information. A link was finally procured and deployed six months into the operation. At that stage of the operation, however, personnel accounting, strength reporting, and personnel management were already severely degraded and unreliable.³⁵

An extensive communications infrastructure was needed in the conflict to ensure timely updates to databases. Because it was largely nonexistent or had to be patched together later in the operation, the currency of SIDPERS data and its accuracy was seriously jeopardized.

Chapter 6 Conclusions

There were many problems encountered during Operation DESERT STORM due to the inability of the personnel community to satisfy doctrinal expectations. The disconnect between doctrine and practice resulted in serious backlogs, increased workloads, extensive processing delays, lost accountability of soldiers and civilians, out of date data, incorrect data,

system nonresponsiveness, reporting inconsistencies, ineffective personnel management, and most important degraded service to the soldier. These problems seriously jeopardized the utility of personnel automation as a whole. With all the problems that were encountered, it is no wonder that to this day the personnel community is trying to sort out the status of tens of thousands of soldiers who participated in the war.

CHAPTER 6

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CHAPTER 7

THESIS CONCLUSIONS

There is no question that, during Operation DESERT STORM, the personnel community utilized personnel automation in support of personnel accounting and strength reporting much differently than doctrine anticipated. Consequently, there were some serious problems which affected the ability of the personnel community to provide quality personnel service support. The purpose of this chapter is to summarize the differences between doctrine and practice, to summarize the consequences or problems that resulted, and finally, to present some general recommendations/considerations for those who will be working to find the solutions to the problems encountered.

Summary of Doctrine vs. Practice

There were several major differences between doctrinal expectations and how the personnel community actually performed personnel automation during Operation DESERT STORM. Functional expectations generally exceeded what doctrine anticipated. Personnel units/elements continued using/maintaining peacetime software even though doctrine intended the use of streamlined, wartime software. Existing interfaces between automated systems were generally

not flexible or timely enough to support the operation, contrary to expectation. The hardware had not been fielded everywhere intended nor was it always properly used where it was fielded. And finally, communications initially was virtually nonexistent and had to be patched together, even though personnel doctrine had intended it to be there.

Summary of Impacts from Noncompliance with Doctrine

The differences between doctrine and practice impacted the ability of the personnel community to account for the force and provide quality personnel service support. With functional expectations being excessive, personnel units/elements experienced increased workloads and serious backlogs. Peacetime software required personnel elements/units to maintain more data, adding to their workload. Because many units had difficulty using the software available, accuracy of data was jeopardized. Inflexible interfaces resulted in the manual loading of data, adding to the workload, especially at mobilization stations. In some cases, the lack of interfaces resulted in lost accountability of those deployed to Southwest Asia. Lack of sufficient hardware for personnel units/elements seriously affected data accuracy and overall personnel automation support. And finally, without adequate communications, personnel units/elements had to resort to other means of passing transactions such as by mail or by courier. This resulted in lengthy delays and directly

impacted data currency. Overall, personnel management decisions suffered from outdated, incorrect data.

Recommendations/Considerations

There are several recommendations that should be considered by those who will work on finding the solutions to the personnel automation problems encountered during the war. These recommendations/considerations are listed below.

The personnel community needs to re-examine its personnel automation doctrine. Our wartime doctrine can no longer be oriented to a European or total war scenario, but must provide for scenarios of less than full mobilization. Doctrine must describe the data flow for personnel accounting and strength reporting as it transitions from an immature theater, with few personnel assets, to a theater with the full range of personnel units/elements to include a theater PERSCOM. Doctrine needs to define what data and reports are required at each echelon. Doctrine needs to define how to handle the reserve component, especially in scenarios of less than full mobilization. Finally, doctrine needs to define how to actually deploy the force and then how to redeploy the force back to their home stations after the conflict is over. Overall, the doctrine must allow greater flexibility and more options for the personnel community.

All efforts should be expended to streamline the workload for personnel units/elements deployed in war. Their focus must be on supporting the war effort and not on maintaining peacetime systems and functions. If peacetime functionality must be maintained, then it should be done exclusively by the CONUS sustaining base, not dependent on the units deployed in a theater of war to perform any of the peacetime missions. During Operation DESERT STORM, even though the forces in Southwest Asia were facing a potential mid to high intensity conflict against the fourth largest Army in the world and with an anticipated 30,000+ American casualties, personnel units/elements struggled to support peacetime requirements.

Likewise, units deployed to fight a war should be filled and managed at their wartime required strengths. If this is not possible, then the automated personnel and structure systems must be adapted so that they will allow the transition, by unit, between the different levels of authorized strengths to wartime required strength as the conflict escalates in intensity.

An adequate automated task force capability must be developed for field use. Task forcing is now the norm and will likely increase as different types of units become more and more integrated on the battlefield.

There needs to be a balanced deployment of units at all echelons. If this is not possible due to the need to frontload combat units, then the Army must, at least, identify the minimum critical combat service support (CSS) forces required for early deployment.

Once it is determined that a theater personnel command (PERSCOM) is needed, it must be deployed/organized rapidly. A reserve theater PERSCOM structure (already in the force structure) could be activated in the continental United States (CONUS) initially, begin the process of establishing theater policies/procedures/direction, and then incrementally deploy and transition to a theater location.

The Army should carefully review the need for a total integrated personnel system. Granted, Congress has halted efforts toward that end before. Nevertheless, much of the personnel functionality between the three components is the same and could be standardized and integrated. Understandably, this may never be possible. Even so, the personnel community must not halt efforts to establish a single source database between components with standardized data elements (the Total Army Personnel database - TAPDB).

A deployable wartime Standard Installation/Division Personnel System (SIDPERS) package is needed and should be

used. If the current SIDPERS-Wartime software is inadequate, then it must be redesigned or replaced.

The Command and Control Strength Reporting System (C2SRS) software needs revision. Currently, it is too complex and cumbersome to use. The software must be simple or the field just will not use it, as indicated by the experience of the Gulf War. It must also be designed to work with the SIDPERS-Wartime software.

SIDPERS must allow the ability for the field to track the different categories of reservists activated. In most cases, it is the field, not the top of the system, which makes the crossleveling/assignment decisions. This information is especially critical for redeployment purposes.

Personnel automation must allow for greater flexibility and responsiveness to the system users. The personnel community must be able to tailor reports and outputs to meet their unique needs. Query capability is a must. Nevertheless, there is a need for standardization and consistency throughout the Army, but this need must not so completely restrict system users that they feel compelled to seek out other automation possibilities readily available on commercial markets.

When the Department of the Army (DA) resolves system shortcomings, then the field needs to implement the changes. During Operation DESERT STORM, there were occasions when

problems could have been solved if only the field had implemented the changes identified by DA.

Software needs to be developed and fielded which would allow for a corps/theater roll-up capability. A good start would be to work with the Soldier Support Center corps prototype software.

For future conflicts requiring echelon above corps units, the Army should seriously consider allowing the processing of SIDPERS transactions within the theater itself and not thousands of miles away by many different activities.

The interface between the Mobilization Personnel System (MOBPERS) and SIDPERS must be improved. If possible, MOBPERS must be enhanced to allow for the accessioning of soldiers at other than their doctrinally defined mobilization stations. Adding data elements to the MOBPERS accessioning record should also be considered. The best solution would be to create a central mobilization database from which the mobilization stations could pull down accessioning data.

Improvement needs to be made with the interface between the Status of Resources and Training System (SORTS) and SIDPERS. Although the use of derivative unit identification codes (UICs) proved useful for the personnel community, the Army must identify those units most likely to be deployed incrementally and document each increment with

its own unique UIC. The same is true for patient/replacement holding detachments. Finally, SORTS must improve it's timeliness or currency problems. These problems directly impact the automated personnel systems.

The personnel community needs to develop and field an automated postal locator with SIDPERS interface. A good start would be to look at those systems improvised during the war.

There must be automated accountability for civilian personnel deployed to a theater of war. Either the Automated Civilian Personnel System (ACPERS) must develop a deployable software package or SIDPERS must be enhanced to accommodate civilian accountability. The latter may be more difficult to achieve in the short term as SIDPERS would require massive revision.

An automated interface between SIDPERS and the Theater Army Medical Management Information System (TAMMIS) must be established. This is critical to ensure that accountability is not lost when casualties are evacuated to the hospitals.

As long as the Department of the Army keeps the automation architecture closed, then the Tactical Combat Service Support Computer System (TACCS) needs to be fielded to the rest of the reserve component units. What is important is that all units, both active and reserve, must

have the hardware to perform personnel accounting and strength reporting. Furthermore, once initial training is completed on the hardware, then all units must retain their proficiency through sustainment training. also, all mobilization stations need to have TACCS equipment, or comparable equipment, for their activating units to use or train on while their equipment is shipped.

The Corps/Theater ADP Service Center II (CTASC II) needs to be fielded to the corps and theater levels. But before the personnel community commits itself to the CTASC II, it needs to ensure that CTASC II will provide the capability that is needed. In the meantime, if CTASC I is available, then it should be used.

CSS units are practically void of tactical communications which could be used to transmit data. This shortfall in communications must be addressed. The Army must fund the movement of data between echelons or the same problems will resurface during the next conflict.

The personnel community, in coordination with the signal community, must resolve what is needed for theater to CONUS communications. Then doctrine will have to be changed and funding be made available to satisfy any new requirements.

Many of the problems identified in this thesis may be solved through the application of new technologies. This is

particularly so with the problems encountered with hardware and communications. The Army should give greater consideration to using nondevelopmental items (NDI). Although Army developed equipment may be ruggidized, it is also far more expensive to replace and usually behind the times when it is finally fielded. TACCS for example has been fielded for years and now with funding constraints, it is questionable whether the rest of the reserve component will ever get their TACCS equipment. In the meantime, laptop equipment is sold on the market with comparable capabilities and at much lower prices. It is time to open the architecture to allow greater flexibility and diversity. The technology today allows for that possibility.

Chapter 7 Conclusions

With an understanding of how personnel automation was practiced during Operation DESERT STORM, how it varied from doctrine, and how these variations impacted personnel automation support, the personnel community may now reassess its automation capabilities and improve upon them. The personnel community will no doubt recover from the challenges faced during Operation DESERT STORM. The problems identified in this thesis should be analyzed for possible solutions. The Army may then incorporate these solutions into current systems through enhancements as well as through the design and development of future personnel automation projects. With doctrine changed to incorporate these solutions, the

personnel community must be disciplined enough to comply with it. In conclusion, the personnel community must learn from the problems encountered during Operation DESERT STORM and build a better automated personnel system to meet the challenges of tomorrow's wars.

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