



INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
400 ARMY NAVY DRIVE
ARLINGTON, VIRGINIA 22202-2884

REPORT
NO. 91-048

February 15, 1991

MEMORANDUM FOR ASSISTANT SECRETARY OF THE AIR FORCE (FINANCIAL
MANAGEMENT AND COMPTROLLER)

SUBJECT: Report on the Audit of the Use of Mobile
Computers--Air Force (Project No. OFE-0024)

Introduction

We are providing this final report on the Audit of the Use of Mobile Computers--Air Force for your review and comments. The audit was conducted from November 1989 through August 1990. The audit was part of our review of the use of mobile computers throughout DoD. Our overall objectives were to evaluate the effectiveness of present systems and to determine the need for any proposed improvements. Specifically, we determined whether the mobile computers met approved requirements and satisfied user needs, including training, and whether the proposed improvements were necessary. We also evaluated internal controls over the acquisition and management of movable automated data processing (ADP) equipment and determined compliance with applicable laws and regulations.

The Transportable Shelter System (TSS) operates at 18 bases in Europe and the Pacific in support of wartime operations. The TSS is the backup computer to the fixed-site Standard Base Level Computer (the Base Computer). Through FY 1990, the TSS cost over \$46 million to procure, operate, and maintain. The audit showed that the Air Force needed to retain no more than 5 of the 18 TSS's. This would save the Air Force \$27.3 million (Enclosure 2).

Background

Air Force documents show that ADP support is needed during contingencies and in wartime to meet mission needs. In December 1982, Headquarters, USAF approved the acquisition and deployment of 18 TSS's (13 in Europe and 5 in the Pacific) to be placed at selected overseas bases to support the Centers' computers.

According to objectives stated in the TSS's Concept of Operations (CONOPS), dated August 18, 1986, the TSS is designed to meet both survivability and mobility requirements of the Air Force. The CONOPS stipulates that using commands are to develop specific plans and procedures to employ and support their assigned TSS. In peacetime, the TSS's are used exclusively by U.S. Air Force Europe (USAFE), Pacific Air Forces (PACAF), and

Military Airlift Command (MAC) bases to support part of the ADP workload. Air Force guidance emphasized that essential wartime and contingency support requirements cannot be compromised in favor of day-to-day operations.

The primary mission of the TSS is to support wartime and contingency operations by:

- assuring that on-base support capability is available to process mission-critical requirements if the Center is destroyed;

- reconstituting on-base information systems at key operating bases by relocating a TSS from another base; and

- establishing vital information services to support command operations.

The TSS's CONOPS designates four functional areas as essential to support mission requirements: supply, maintenance, military personnel, and air crew operations.

The Air Force has placed 13 TSS's in Europe, 5 each in the United Kingdom and the Federal Republic of Germany and 1 each in Italy, Turkey, and the Netherlands. A total of 78 support personnel operate and maintain those TSS's in Europe, four computer operators are assigned to each TSS. Seven TSS's have three to four military maintenance personnel each, while six TSS's are maintained by contractors; a contractor maintains backup ADP equipment for all systems. Each TSS is housed in four movable (8' x 8' x 20') shelters containing environmental control units. Contractors maintain the support equipment for the five TSS's in the United Kingdom; the others are maintained by the base civil engineers. In FY 1990, the cost to operate each TSS in Europe was between \$180,539 and \$303,600.

Scope of Audit

We reviewed USAFE's mission and use of the TSS's for the period October 1988 to April 1990. We visited Headquarters, USAF; Headquarters, USAFE; Headquarters, MAC; and 8 of the 13 bases in USAFE that had TSS's in 1990. Activities we visited or contacted are shown at Enclosure 3. Potential monetary benefits of \$27.3 million, shown at Enclosure 2, are based on eliminating:

- 13 TSS's

- 73 military personnel positions,

- contract maintenance on ADP equipment for 13 TSS's in Europe and the Pacific, and

- support equipment (shelters, environmental control units, and generators) for 4 TSS's in the United Kingdom.

This self-initiated economy and efficiency audit was made from November 1989 through August 1990 in accordance with auditing standards issued by the Comptroller General of the United States as implemented by the Inspector General, DoD, and accordingly included such tests of internal controls as were considered necessary.

Internal Controls

We reviewed the implementation of the Federal Managers' Financial Integrity Act at USAFE as it related to our audit scope. Overall, internal controls were adequate to effectively manage the use of mobile computers. Internal controls should ensure that:

- ADP operations meet peacetime and wartime needs, and
- ADP operations are periodically tested to ensure that backup processing meets those needs.

USAFE's Annual Statement of Assurance for FY 1989 showed an internal control weakness for FY 1988 as defined by Public Law 97-255, Office of Management and Budget Circular A-123, and DoD Directive 5010.38. The weakness concerned developing and testing Continuity of Operations Plans (COOP's) at bases. CINCUSAFE OPLAN 4102 did not specifically refer to the TSS's as backup computers to the Data Processing Centers (the Centers) during contingencies.

Our tests of internal controls at the four Centers revealed that they had developed, but not scheduled or tested, their COOP's. Headquarters, USAFE tasked the bases to develop a plan, test it, and report the results by June 1990. USAFE had not changed CINCUSAFE OPLAN 4102 to refer to the TSS as the backup computer. USAFE planned to identify the TSS as the backup computer in the OPLAN, but had not done so by May 1990. Also, MAC had not developed the required CONOPS for its TSS at Rhein-Main Air Base.

Prior Audit Coverage

The Air Force Audit Agency had issued three related audit reports. The first, "DoD-Wide Review of the Air Force Use of Computers in Combat Service Support Functions (Project 5195422)," March 16, 1987, addressed mobile computers, but was limited to microcomputers.

The other two reports, "Review of the Transportable Shelter System, HQ USAFE, Ramstein AB, Germany (Project 9195420)," August 22, 1989, and "Review of the Transportable Shelter System,

2134th Communications Squadron, Sembach AB, Germany (Project 9195420)," September 8, 1989, covered the TSS as backup to mainframe computers for the Centers in the European theater. The reports disclosed the lack of formal planning, development, testing, and implementation for the TSS's at Headquarters, USAFE and host bases.

The "Review of the Transportable Shelter System, HQ USAFE, Ramstein AB, Germany" stated that the TSS could not fully perform the wartime mission; operator and mobility training were lacking; host units had not been tasked to support deployments; and dedicated personnel were detailed to non-TSS tasks. The Air Force Audit Agency concluded that the TSS were not deployable to fully support vital contingency and wartime missions and recommended that Headquarters, USAFE:

- establish a pilot TSS and test the adequacy of CINCUSAFE Plan 4662-89 (the Plan);
- review the Plan annually and update it in accordance with applicable directives;
- establish procedures for guidance and tasking of base organizations to support the TSS, and verify prompt implementation of the taskings; and
- establish a training program with uniform training requirements for all TSS personnel.

In response to the recommendations, Headquarters, USAFE tasked the bases to develop a plan in accordance with CINCUSAFE Plan 4662-89, test it, and report the results by June 1990. As of May 21, 1990, when the audit team finished the field work, four of the sites had developed plans but had not tested them or scheduled annual tests. The management reply to the August audit report stated that USAFE/SCOX (European Communications Division, Operations and Plans Section) would establish deadlines for developing and testing operations plans. A uniform training program had not been implemented to correct TSS training deficiencies; however, USAFE had tasked the bases to develop TSS plans.

Discussion

The Air Force needs to retain no more than 5 TSS's (3 in Europe and 2 in the Pacific). The processing capacity of the TSS did not satisfy backup requirements for wartime. An upgrade of the Base Computer and plans to upgrade some of the TSS's and provide a linkup to the Defense Data Network (DDN) will provide the processing capacity to meet wartime needs. These TSS's will be used if ADP capability or a DDN linkup are unavailable at the host center or a deployed location. These improvements will eliminate the need for at least 13 of the 18 TSS's, as well as associated military personnel and contract maintenance.

Technological Improvements. Since installation of the TSS in 1986, improvements in communications and computer technology have decreased the need for mobile backup. During the audit, the Base Computer was being upgraded from the Unisys 1100/60 to 2200/400 series computer, improving its processing speed and capacity. The processing capacity of the TSS's ranged from 2.5 to 4.0 megawords, while wartime needs had increased to between 3.5 and 4.5 megawords. The planned upgrade of the TSS will provide three times the processing speed and 8.0 megawords of processing capacity. This increased capacity will meet the largest base's processing requirements. Connecting the TSS to the DDN will also allow a deployed unit to transfer data to a TSS or to a Data Processing Center, decreasing the need for movable backup computers.

Upgrading Systems. Following the upgrade of the Base Computer systems, the Air Force planned to upgrade six of the existing TSS's to the Unisys 2200/400 series, at an estimated cost of \$4.2 million. The doubled capacity will allow simultaneous processing of the four wartime functions: supply, maintenance, military personnel, and air crew operations. The four bases we visited did not have this capability, and operating personnel cited its lack as the reason they could not meet their wartime mission needs.

Headquarters, Directorate for Command, Control, and Mission Support Systems (USAF/SCM), allotted three of the TSS upgrades to USAFE, one to MAC, and two to PACAF. During the audit, Headquarters, USAFE recommended upgrading 3 TSS's to process the work load of the largest base in the theater, and reducing the number of TSS's from 12 to 3. Headquarters, PACAF also recommended reducing its TSS's from five to two. Headquarters, MAC did not make a similar recommendation for its TSS (MAC had no stated peacetime or wartime mission). At the time our audit work ended, the Headquarters, U.S. Air Force was still considering the recommendations, but no final decision had been made. Also, the recommendations did not include eliminating the 73 personnel positions (55 in Europe and 18 in PACAF) to support the TSS. MAC had not developed and approved the required CONOPS plan with a clear statement of its TSS's intended use.

The MAC TSS at Rhein-Main Air Base was not operational during 10 (53 percent) of the 19 months from October 1988 through April 1990, lacked direct linkup to the DDN, and was not used in exercises. A message sent on October 18, 1989, from the 1945th Communications Group Commander to the Air Force Communications Command/Airlift Communications Division (AFCC/ACD) Commander stated that there was no documented peacetime or wartime mission. This was confirmed in the reply to the message, dated November 21, 1989. The 1945th Commander stated in the original message and to the audit team that the TSS was "a drain on our resources without any return" and that "ECD (USAFE) could easily support any MAC contingency in Europe with a few (probably three)

TSS's, fully funded." Since MAC has no need for its TSS, no more than five (instead of six) TSS's in Europe and the Pacific need to be upgraded.

Estimated Savings. Reducing the TSS's from 18 to 5 would save the Air Force \$27.3 million during the next 6 years. These savings would result from eliminating 13 TSS's and the associated staffing and contract maintenance support. We recommended specific reductions in:

o Backup Systems. Elimination of the 13 TSS's no longer needed in Europe and the Pacific would reduce hardware and software costs by \$9 million.

o Staffing. Decreasing the TSS's by 13 (10 in Europe and 3 in the Pacific) would reduce the need for 52 operators and 21 maintenance personnel. In Europe, positions for 40 operators and 15 maintenance personnel could be eliminated, as well as 12 operators and 6 maintenance personnel in the Pacific. This would save \$12.6 million.

o Contract Maintenance. Contract maintenance for ADP equipment would no longer be needed for the 10 TSS's in Europe and 3 TSS's in the Pacific. Contract maintenance for support equipment could also be terminated for the four TSS's in the United Kingdom. This would save \$5.7 million.

Internal Controls. Internal controls were generally adequate and in compliance with applicable laws and regulations. However, an internal control weakness existed in that MAC had not developed and tested a CONOPS as required for each major command. The elimination of 13 TSS's and the associated personnel and maintenance support will correct the internal control weakness and save \$27.3 million (\$20.5 million in Europe and \$6.8 million in the Pacific).

Recommendations

We recommend that the Air Force Assistant Chief of Staff, Systems for Command, Control, Communications and Computers:

1. Reduce the number of Transportable Shelter Systems by at least 13 (10 in Europe and 3 Pacific).

2. Direct the U.S. Air Forces in Europe, the Military Airlift Command, and U.S. Pacific Air Forces to:

a. Eliminate the 73 computer operator and maintenance positions assigned to support the 13 Transportable Shelter Systems in Europe and the Pacific, and

b. Terminate contract maintenance for automated data processing equipment at the 13 Transportable Shelter Systems and support equipment at the 4 locations in the United Kingdom.

Management Comments

A draft of this report was provided to the Air Force on November 6, 1990. We received the Air Force's comments on the draft report (Enclosure 1) on January 16, 1991. Management concurred with the finding and recommendations. On November 16, 1990, the Air Force made the decision to terminate support for all 18 TSS systems at the end of FY 1991. The Air Force has returned the savings to DoD as part of Defense Management Review Directive 924 for regionalization of ADP facilities.

Audit Response to Management Comments

Management's actions are responsive and satisfy the requirements of DoD Directive 7650.3. Based on the Air Force's comments we made appropriate changes to the report and recommendations. A reply to this final report is not required.

The courtesies extended to the audit staff are appreciated. A list of audit team members is at Enclosure 4. Copies of this report will be provided to the activities shown at Enclosure 5.

If you have any questions about this audit, please contact Mr. Terry L. McKinney at (703) 693-0430 (DSN 223-0430) or Mr. Carl F. Zielke at (703) 693-0453 (DSN 223-0453).



Robert J. Lieberman
Assistant Inspector General
for Auditing

Enclosures

cc:
Secretary of the Air Force



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON, D.C. 20330

19 JAN 1991

MEMORANDUM FOR DIRECTOR, FINANCIAL MANAGEMENT DIRECTORATE
OFFICE OF THE INSPECTOR GENERAL
DEPARTMENT OF DEFENSE

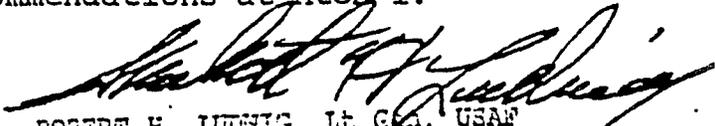
SUBJECT: Draft Report on the Audit of the Use of Mobile
Computers - Air Force (Project No. OFE-0024)
(Your Memo, 6 Nov 90) - INFORMATION MEMORANDUM

This responds to your memorandum for Assistant Secretary of the Air Force (Financial Management and Comptroller) requesting comments on the findings and recommendations made in subject report.

We have reviewed the draft audit (Project No. OFE-0024) and because of Air Force actions already taken, recommend closure. The Air Force, through a review and revalidation of requirements and evaluation of the current concept of data automation support being provided to Operation Desert Shield, has determined that further investment and continued support of the Tactical Shelter System (TSS) is no longer desirable. All support of the system will be terminated by the end of FY91. Directions to accomplish this have been provided to the operating commands.

Because of the Air Force decision to discontinue all support of the TSS by the end of FY91, the momentary benefits reflected in the audit are no longer valid. There were no FY91 funds budgeted for upgrades and the Air Force has returned all expected savings as part of the Defense Management Review Directive 924 for regionalization of automated data processing facilities.

Specific rationale and justification are contained in our comments to the audit report recommendations at Atch 1.


ROBERT H. LUDWIG, Lt Gen, USAF
DCS/Command, Control,
Communications, and Computers

1 Atch
Comments

Air Force Response to
DoD(IG) Draft Report on the
Audit of Use of Mobile Computers - Air Force,
6 November 1990 (Project OFE-0024)

1. FINDING: The Air Force needs to retain only 5 of its 18 Systems (3 in Europe and 2 in the Pacific). At present, the System's processing capacity does not satisfy backup requirements for wartime. An upgrade of the fixed-site Standard Base Level Computer (the Base Computer) and plans to upgrade some of the backup Systems and provide connectivity to the Defense Data Network (DDN) will give the systems the processing capacity to meet wartime needs. The Systems will be used if data processing capability or DDN connectivity are unavailable at the host center or at a deployed location. These improvements will eliminate the need for 13 of the 18 backup Systems, as well as associated military personnel and contract maintenance. While USAFE had not implemented a uniform training program to correct deficiencies in System training, bases were tasked to develop plans.

USAF RESPONSE: Concur. During 1990 the Air Force reviewed the requirement for the Tactical Shelter System (TSS) and the proposed alternatives to upgrade them to meet the wartime requirement. In conjunction with this review, Operation Desert Shield provided evaluation and implementation of alternate solutions.- In addition, Defense Management Review Directive (DMRD) 924, Consolidation of Automated Data Processing (ADP) Facilities, will result in removal from the base and consolidate at regional computer centers the mainframe computer system the TSS was designed as back-up to. In this new environment it would be costly and complex for the TSS to support processing. While recognizing the need for wartime ADP support, the Air Force determined continued support for the TSS was not justified. As a result, in an AF/SCM message (DTG 161600 Nov 90), direction was given to the operating commands to terminate all support for operations, maintenance and manpower effective the end of 4th Quarter FY91. This message also directed the units to obtain disposition instructions. Because of the Air Force decision to terminate the entire TSS program the momentary benefits reflected in the audit are no longer valid. Additionally, there were no funds budgeted in FY91 for upgrades and all future program dollars have been removed from the Air Force budget. All of the savings realized from termination of the program have been captured as part of DMRD 924 savings.

2. DoD(IG) RECOMMENDATION: Reduce the number of Transportable Shelter Systems in Europe by 10 and the Pacific by 3.

USAF RESPONSE: Concur. Request closure of this recommendation for the reasons stated in the above response to the finding.

3. DoD(IG) RECOMMENDATION: Direct the U.S. Air Forces in Europe, the Military Airlift Command, and U.S. Pacific Air Forces to:

a. Eliminate the 73 computer operator and maintenance personnel positions assigned to support the 13 Transportable Shelter Systems, and

b. Terminate contractor maintenance for automated data processing equipment at the 13 Transportable Shelter Systems and the support equipment at the 4 systems.

USAF RESPONSE: Concur. Request closure of this recommendation for the reasons stated in the above response to the finding.

SUMMARY OF POTENTIAL MONETARY AND OTHER
BENEFITS RESULTING FROM AUDIT

<u>Recommendation Reference</u>	<u>Description of Benefit</u>	<u>Amount and Type of Benefit (Millions)</u>
1. and 2.	Economy and Efficiency. Savings to the procurement, military personnel, and operations and maintenance appropriations. The figures are based on reducing 13 Systems (10 in Europe and 3 in the Pacific) during the Future Years Defense Program.	\$27.29 of funds put to better use.

	<u>FY 1991</u>	<u>FY'S 1992-1996</u>	<u>FYDP</u>
Reductions:			
Procurement	\$ 9.10	\$ 0	\$ 9.10
Military Personnel	2.09	10.51	12.60
Contract Maintenance	.96	4.78	5.74
Subtotal	<u>\$12.15</u>	<u>\$15.29</u>	<u>\$27.44</u>
Conversion Costs:			
Procurement	\$.09	\$.00	\$.09
Operations and Maintenance	.06	.00	.06
Subtotal	<u>.15</u>	<u>.00</u>	<u>.15</u>
Net Savings	<u><u>\$12.00</u></u>	<u><u>\$15.29</u></u>	<u><u>\$27.29</u></u>

ACTIVITIES VISITED OR CONTACTED

Office of the Secretary of Defense

Assistant Secretary of Defense (Force Management and Personnel),
Washington, DC
Headquarters, U.S. European Command, Stuttgart, FRG

Department of the Air Force

Secretary of the Air Force, Washington, DC
Assistant Secretary (Acquisition), Directorate of Tactical
Programs, Washington, DC
Assistant Secretary (Financial Management and Comptroller),
Director, Budget Operations, Washington, DC
Assistant Chief of Staff, Systems for Command, Control,
Communications and Computers, Washington, DC
Deputy Chief of Staff, Logistics and Engineering, Directorate of
Maintenance and Supply, Armament, Munitions and Missiles
Division, Washington, DC
Headquarters, U.S. Air Force Military Personnel Center, Randolph
Air Force Base, TX
Headquarters, Tactical Air Command, Langley Air Force Base, VA
Headquarters, U.S. Air Forces in Europe, Ramstein Air Base, FRG
316th Air Division, Ramstein Air Base, FRG
Headquarters, 17th Air Force, Sembach Air Base, FRG
Headquarters, 601st Tactical Control Wing, Sembach Air Base,
FRG
601st Tactical Control Squadron, Zweibrucken Air Base, FRG
26th Tactical Reconnaissance Wing, Zweibrucken Air Base, FRG
50th Tactical Fighter Wing, Hahn Air Base, FRG
36th Tactical Fighter Wing, Bitburg Air Base, FRG
52nd Tactical Fighter Wing, Spangdahlem Air Base, FRG
Headquarters, 3rd Air Force, Royal Air Force, Mildenhall, UK
513th Airborne Command & Control Wing, Royal Air Force,
Mildenhall, UK
48th Tactical Fighter Wing, Royal Air Force, Lakenheath, UK
20th Tactical Fighter Wing, Royal Air Force, Upper Heyford, UK
Headquarters, Military Airlift Command, Scott Air Force Base, IL
322nd Airlift Division, Ramstein Air Base, FRG
435th Tactical Airlift Wing, Rhein-Main Air Base, FRG
608th Aerial Port Squadron, Ramstein Air Base, FRG
10th Military Airlift Squadron, Zweibrucken Air Base, FRG
313th Tactical Airlift Group, Royal Air Force, Mildenhall, UK
5th Mobile Aerial Port Squadron, Royal Air Force, Mildenhall,
UK

ACTIVITIES VISITED OR CONTACTED
(continued)

Headquarters, Air Weather Service, Scott Air Force Base, IL
2nd Weather Wing, Kapaun Air Station, FRG
31st Weather Squadron, Detachment 1, Bitburg Air Base, FRG
31st Weather Squadron, Detachment 11, Spangdahlem Air Base,
FRG
28th Weather Squadron, Royal Air Force, Mildenhall, UK
28th Weather Squadron, Detachment 3, Royal Air Force,
Lakenheath, UK
Headquarters, Air Force Communications Command, Scott Air Force
Base, IL
Air Force Communications-Computer Systems Integration Office,
Scott Air Force Base, IL
7th Communications Squadron, Pentagon, Washington, DC
1912th Communications Support Group, Langley Air Force Base,
VA
1945th Communications Group, Rhein-Main Air Base, FRG
Headquarters, European Communications Division, Ramstein Air
Base, FRG
2005th Communications Wing, Sembach Air Base, FRG
1856th Communications Group, Ramstein Air Base, FRG
2139th Communications Squadron, Bitburg Air Base, FRG
2137th Communications Squadron, Spangdahlem Air Base, FRG
2134th Communications Squadron, Sembach Air Base, FRG
2143rd Communications Squadron, Zweibrucken Air Base, FRG
2147th Communications Wing, Royal Air Force, Mildenhall, UK
2176th Communications Squadron, Royal Air Force, Mildenhall,
UK
1979th Communications Squadron, Royal Air Force, Lakenheath,
UK
2168th Communications Squadron, Royal Air Force, Upper
Heyford, UK

Non-Government Activities

Unisys Corporation, Hahn Air Base, FRG
Unisys Corporation, Royal Air Force, Upper Heyford, UK

AUDIT TEAM MEMBERS

Nancy L. Butler, Director, Financial Management
Terry L. McKinney, Program Director
Carl F. Zielke, Project Manager
Robert P. Bertocchi, Team Leader
Maresa A. Burris, Auditor
Susanne B. Allen, Editor

FINAL REPORT DISTRIBUTION

Office of the Secretary of Defense

Assistant Secretary of Defense (Force Management and Personnel)
Assistant Secretary of Defense (Public Affairs)
Comptroller of the Department of Defense

Department of the Navy

Auditor General, Naval Audit Service

Department of the Air Force

Secretary of the Air Force
Assistant Secretary of the Air Force (Acquisition)
Assistant Secretary of the Air Force (Financial Management and
Comptroller)
Auditor General, Air Force Audit Agency
Headquarters, U.S. Air Forces in Europe

Defense Activities

Director, Defense Logistics Agency
Director, Defense Logistics Studies
Director, Defense Contract Audit Agency

Non-DoD Activities

Office of Management and Budget
U.S. General Accounting Office,
NSIAD Technical Information Center

Congressional Committees:

Senate Subcommittee on Defense, Committee on Appropriations
Senate Committee on Armed Services
Senate Committee on Governmental Affairs
Senate Ranking Minority Member, Committee on Armed Services
House Committee on Appropriations
House Subcommittee on Defense, Committee on Appropriations
House Ranking Minority Member, Committee on Appropriations
House Committee on Armed Services
House Committee on Government Operations
House Subcommittee on Legislation and National Security,
Committee on Government Operations

