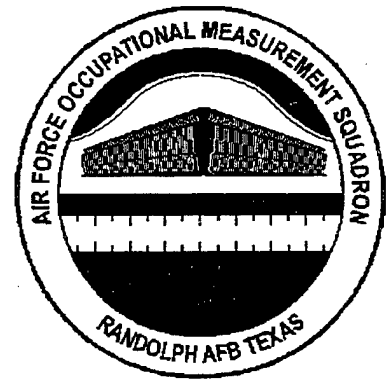


DTIC



UNITED STATES AIR FORCE

OCCUPATIONAL SURVEY REPORT

**ELECTRONIC COMPUTER AND
SWITCHING SYSTEMS**

AFSC 2E2X1

OSSN 2291

JULY 1998

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**OCCUPATIONAL ANALYSIS PROGRAM
AIR FORCE OCCUPATIONAL MEASUREMENT SQUADRON
AIR EDUCATION AND TRAINING COMMAND
1550 5TH STREET EAST
RANDOLPH AFB, TEXAS 78150-4449**

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PREFACE

This report presents the results of an Air Force Occupational Survey of the Electronic Computer and Switching Systems career ladder, Air Force Specialty Code (AFSC) 2E2X1. Authority for conducting occupational surveys is contained in AFI 36-2623. Copies of this report and pertinent computer printouts are distributed to the Air Force Functional Manager, the technical training location, all major using commands, and other interested operations and training officials.

The survey instrument was developed by Mr. Michael F. Brosnan. Computer programming support was provided by Mr. Tyrone Hill. Administrative support was provided by Mr. Richard G. Ramos. First Lieutenant Thomas E. Murphy II analyzed the data and wrote the final report. This report has been reviewed and approved by Lieutenant Colonel Roger W. Barnes, Chief, Airman Analysis Section, Occupational Analysis Flight, Air Force Occupational Measurement Squadron (AFOMS).

Additional copies of this report can be obtained by writing to AFOMS/OMYXI, 1550 5th Street East, Randolph AFB Texas 78150-4449, or by calling DSN 487-5543. For information on the Air Force occupational survey process or other on-going projects, visit our web site at <http://www.omsq.af.mil>.

GEORGE KAILIWAI III, Lt Col, USAF
Commander
Air Force Occupational Measurement Squadron

JOSEPH S. TARTELL
Chief, Occupational Analysis Flight
Air Force Occupational Measurement Squadron

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SUMMARY OF RESULTS

1. **Survey Coverage:** The Electronic Computer and Switching Systems career ladder was surveyed to provide current job and task data for use in updating career ladder documents and training programs. Survey results are based on responses from 1,929 Active Duty, Air National Guard, and Air Force Reserve respondents, accounting for 58 percent of the total population surveyed.
2. **Specialty Jobs:** Four jobs and five clusters were identified in the career ladder structure analysis. The 5 clusters, accounting for 78 percent of all survey respondents, are focused mainly on general computer and switching maintenance, which represents the core tasking of the career ladder. The remaining four jobs consist of Headquarters Staff NCO, Quality Assurance, Job Controller, and Instructor.
3. **Career Ladder Progression:** Skill-level progression for members of this specialty is typical of most career ladders. Three-skill level personnel spend the vast majority of their job time performing technical tasks in the various career ladder jobs. At the 5-skill level, personnel are still heavily involved in performing technical tasks, but also indicate some supervisory tasks performed. Personnel at the 7-skill level begin to become involved with workcenter supervision. Air National Guard and Air Force Reserve 7-skill level personnel are more involved in technical tasks than their Active Duty counterparts. The 9-skill level personnel present in the survey perform mostly higher-level supervisory or Headquarters Staff NCO type-tasks.
4. **Training Analysis:** The current Course Training Standards (CTS) provide comprehensive coverage of the work performed by career ladder personnel. Although a few CTS elements warrant review of proficiency coding based on survey data, overall, the CTSs were very highly supported. The current Plans of Instruction were also highly supported, with only a few objectives found unsupported by survey data.
5. **Job Satisfaction Analysis:** In general, job satisfaction among AFSC 2E2X1 personnel is lower than that of a comparative sample. Reenlistment intentions for first- and second-enlistment airmen are low. Satisfaction is comparable or higher than that of the two previous surveys conducted. Job satisfaction is generally high for all jobs/clusters identified. Job Controllers stood out as being the least satisfied of all jobs/clusters identified. Utilization of talents was low within the Headquarters Staff NCO job.
6. **Implications:** The current AFSC 2E2X1 career ladder structure reflects an overall normal job progression. Four specific jobs and five clusters were identified in the career ladder. Career ladder training documents are well supported by survey data, with some items warranting further review. Overall, job satisfaction is moderate among career ladder incumbents. Reenlistment intentions for first- and second-enlistment airmen are low.

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**OCCUPATIONAL SURVEY REPORT (OSR)
ELECTRONIC COMPUTER AND SWITCHING SYSTEMS
(AFSC 2E2X1)**

INTRODUCTION

This is a report of an occupational survey of the Electronic Computer and Switching Systems career ladder conducted by the Air Force Occupational Measurement Squadron (AFOMS). This career ladder was created in October 1993 with the conversion of AFSC 305X4 to AFSC 2E2X1 under the "whole new classification system." In addition, AFSC 2E7X2, Missile Control Communications Systems, was merged into AFSC 2E2X1 in April 1995. The last OSR for the Missile Control Communications specialty, then labeled as AFSC 362X3, was published in March 1990. Survey data can be used to identify current utilization patterns among career ladder personnel and to evaluate career ladder documents and training programs. The last Electronic Computer and Switching Systems OSR was published January 1993.

Background

As described in AFMAN 36-2108, *Airman Classification*, 31 October 1997, *Specialty Description*, updated 30 April 1997, Electronic Computer and Switching Systems personnel install electronic computer and switching systems and missile control communications; assemble, connect, and interwire components of data transmission, processing, and display equipment; perform preventive maintenance; and repair, modify, and inspect electronic computer, switching systems, and missile control communications equipment.

Personnel entering the AFSC 2E2X1 career ladder must attend the Electronic Computer and Switching Systems Apprentice course at Keesler AFB MS lasting 67 academic days. Upon completion of this course, the graduate is awarded the 3-skill level. The student may then choose to keep the slick AFSC rating, or attend one of the follow-on shred-awarding courses at Keesler AFB. A-shred personnel maintain Modular Control Equipment (MCE). B-shred personnel maintain airborne computer systems, including the E-3A Airborne Warning and Control System (AWACS). C-shred personnel maintain strategic communications, such as missile control communications. Previously, AFSC 2E2X1 personnel were awarded a D-shred as well, but today that shred is awarded only to Air National Guard personnel. The training school for the D-shred course is located at Tyndall AFB FL, and focuses on Joint Surveillance Systems maintenance. No D-shred personnel were surveyed; therefore, the D-shred will not be discussed in this report.

Entry into this career ladder currently requires an Armed Services Vocational Aptitude Test Battery score of Electronic - 67; a strength factor of "J" (weight lift of 60 lbs) is also required.

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SURVEY METHODOLOGY

Inventory Development

The data collection instrument for this occupational survey was USAF Job Inventory (JI) Occupational Survey Study Number 2291, dated June 1997. A tentative task list was prepared after reviewing pertinent career ladder publications and directives, pertinent tasks from the previous survey instrument, and data from the last OSR. The preliminary task list was refined and validated through personal interviews with 91 subject-matter experts (SMEs) at the following training locations and operational installations:

<u>BASE</u>	<u>UNIT VISITED</u>
Keesler AFB MS	336 TRS
Falcon AFB CO	50 SCS 11 SWS
Cheyenne Mountain AS CO	721 CS
Warren AFB WY	90 CS
Barksdale AFB LA	608 ACS 2 CS
Tinker AFB OK	3 CCS 52 CRS
Hurlburt Field FL	505 TSS
Eglin AFB FL	728 ACS
Tyndall AFB FL	325 CS
MacDill AFB FL	JCSE

The resulting JI contains a comprehensive listing of 963 tasks grouped under 19 duty headings, and a background section requesting such information as grade, base, major command (MAJCOM) assigned, organizational level, component status, job title, functional area, equipment maintained, and systems used or maintained.

Survey Administration

From July 1997 through January 1998, base training offices at operational units worldwide administered the inventory to eligible AFSC 2E2X1 personnel. Members eligible for the survey consisted of the total assigned 3-, 5-, 7-, and 9-skill level populations, excluding the following: (1) hospitalized personnel, (2) personnel in transition for a permanent change of station (PCS), (3) personnel retiring within the time the inventories were administered to the field, and (4) personnel in their jobs less than 6 weeks. Job incumbents were selected from a computer-generated mailing list obtained from personnel data tapes maintained by the Air Force Personnel Center, Randolph AFB TX.

Each individual who completed an inventory first completed an identification and biographical information section and then checked each task performed in his or her current job. After checking all tasks performed, each member then rated each of these tasks on a 9-point scale, showing relative time spent on that task, as compared to all other tasks checked. The ratings ranged from 1 (very small amount time spent) through 9 (very large amount time spent).

To determine the relative time spent for each task checked by a respondent, all of the incumbent's ratings were assumed to account for 100 percent of his or her time spent on the job. The ratings were summed and each task rating is then divided by this sum and multiplied by 100 to provide a relative percentage of time for each task. This procedure provides a basis for comparing tasks in terms of both percent members performing and average percent time spent.

Survey Sample

Personnel were selected to participate in this survey to ensure an accurate representation across MAJCOMs and paygrade groups. All eligible Active Duty (AD), Air National Guard (ANG), and Air Force Reserve Command (AFRC) AFSC 2E2X1/A/B/C personnel were mailed survey booklets. Table 1 reflects the percent distribution, by MAJCOM, of assigned AFSC 2E2X1 personnel as of June 1997. Table 2 reflects the paygrade distribution for these AFSC 2E2X1 personnel. The 1,929 respondents in the final sample represent 52 percent of the total assigned personnel and 58 percent of the total personnel surveyed.

TABLE 1

COMMAND DISTRIBUTION OF AFSC 2E2X1 PERSONNEL

COMMAND	PERCENT OF ASSIGNED*	PERCENT OF SAMPLE
ACC	27	35
ANG	10	19
AFSPC	9	10
AETC	6	8
AIA	6	6
AMC	4	4
PACAF	4	4
USAFE	4	4
AFMC	2	2
AFRC	2	3
OTHER	26	5

TOTAL ASSIGNED = 3,707*

TOTAL SURVEYED = 3,338**

TOTAL IN SURVEY SAMPLE = 1,929

PERCENT OF ASSIGNED IN SAMPLE = 52%

PERCENT OF SURVEYED IN SAMPLE = 58%

* Assigned strength as of June 1997

** Excludes personnel in PCS, student, or hospital status, or less than 6 weeks on the job

TABLE 2
PAYGRADE DISTRIBUTION OF SURVEY SAMPLE

GRADE	PERCENT OF ASSIGNED*	PERCENT OF SAMPLE
E-1 - E-3	12	16
E-4	27	27
E-5	31	29
E-6	17	16
E-7	12	11
E-8	1	1
E-9	*	0

* Assigned strength as of June 1997

NOTE: Denotes less than 1 percent

Both command and paygrade distributions of the survey sample are close to the percents assigned, indicating the sample is representative of the career ladder population.

Task Factor Administration

Job descriptions alone do not provide sufficient data for making decisions about career ladder documents or training programs. Task factor information is needed for a complete analysis of the career ladder. To obtain the needed task factor data, selected senior AFSC 2E2X1 personnel (generally E-6 or E-7 craftsmen) also completed a second booklet for either training emphasis (TE) or task difficulty (TD). These booklets were processed separately from the JIs. This information is used in a number of different analyses discussed in more detail within the report.

Training Emphasis (TE): Individuals completing TE booklets were asked to rate tasks on a 10-point scale (from no training required to extremely high amounts of training required). TE is a rating of which tasks require structured training for first-enlistment personnel. Structured training is defined as training provided at resident technical schools, field training detachments, mobile training teams, formal on-the-job training (OJT), or any other organized training method. Unfortunately, the interrater reliability for the TE raters was insufficient. As a result, TE will not be discussed in this report.

Task Difficulty (TD): TD is an estimate of the amount of time needed to learn how to do each task satisfactorily. The 105 senior NCOs who completed TD booklets were asked to rate the difficulty of each task using a 9-point scale (extremely low to extremely high). Interrater reliability was very high. Ratings were standardized so tasks have an average difficulty of 5.00 and a standard deviation of 1.00. Any task with a TD rating of 6.00 or above is considered to be difficult to learn.

When used in conjunction with the primary criterion of percent members performing, TD ratings can provide insight into first-enlistment personnel training requirements. Such insight may suggest a need for lengthening or shortening portions of instruction supporting entry-level jobs.

SPECIALTY JOBS

Career Ladder Structure

The first step in the analysis process is to identify the structure of the career ladder in terms of the jobs performed by the respondents. The Comprehensive Occupational Data Analysis Program (CODAP) assists by creating an individual job description for each respondent based on the tasks performed and relative amount of time spent on these tasks. The CODAP automated job clustering program then compares all the individual job descriptions, locates the two descriptions with the most similar tasks and time spent ratings, and combines them to form a composite job description. In successive stages, CODAP either adds new members to this initial group, or forms new groups based on group differences in tasks and time spent ratings.

The basic group used in the hierarchical clustering process is the *Job*. When two or more jobs have a substantial degree of similarity in tasks performed and time spent on tasks, they are grouped together and identified as a *Cluster*. The structure of the career ladder is then defined in terms of jobs and clusters of jobs.

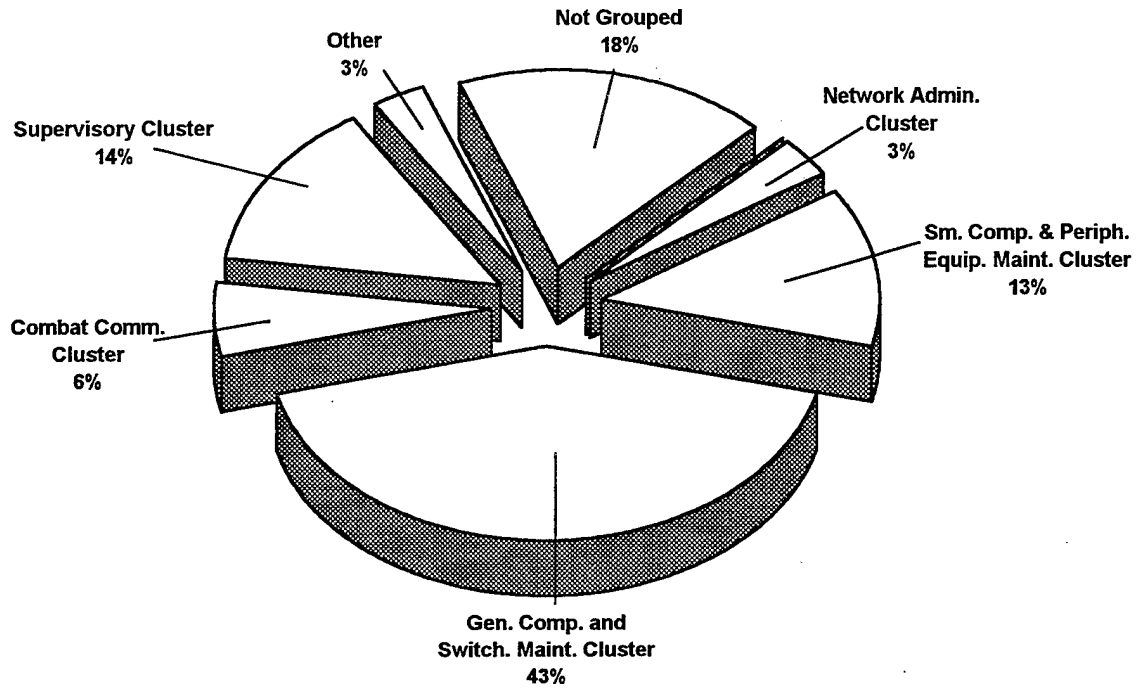
Overview of Specialty Jobs

Based on the analysis of tasks performed and the amount of time spent performing each task, four independent jobs and five clusters were identified within the career ladder. Figure 1 illustrates the jobs and clusters performed by AFSC 2E2X1 personnel. A listing of these jobs and clusters is provided below. The stage (ST) number shown beside each title references computer printed information; the letter "N" indicates the number of personnel in each group.

- I. NETWORK ADMINISTRATION CLUSTER (ST173, N=62)
 - A. Network Maintenance Job (ST390)
 - B. Network Installation Job (ST355)
- II. SMALL COMPUTER AND PERIPHERAL EQUIPMENT MAINTENANCE CLUSTER (ST113, N=254)
- III. GENERAL COMPUTER AND SWITCHING MAINTENANCE CLUSTER (ST133, N=812)
 - A. General Troubleshooting Job (ST281)
 - B. Tactical/Mobile Operations Job (ST419)
 - C. STRATCOM Technician Job (ST396)
 - D. Airborne Computer Maintenance Job (ST383)
- IV. COMBAT COMMUNICATIONS CLUSTER (ST127, N=119)
 - A. Telephone Switch Maintenance Job (ST405)
 - B. Mobility Operations Job (ST446)
 - C. Combat Communications NCOIC Job (ST461)
- V. SUPERVISORY CLUSTER (ST228, N=267)
- VI. HEADQUARTERS STAFF NCO (ST337, N=12)
- VII. QUALITY ASSURANCE JOB (ST438, N=14)
- VIII. JOB CONTROLLER (ST465, N=13)
- IX. TECHNICAL TRAINING INSTRUCTOR (ST464, N=20)

The respondents forming these jobs and clusters account for 82 percent of the survey sample. The remaining 18 percent, for one reason or another, did not group into one of these jobs or clusters. Examples of job titles for these personnel include Data Maintenance Technician, Flight Chief, Computer Systems Monitor, and Theater Battle Management System Technician.

**AFSC 2E2X1 CAREER LADDER SPECIALTY JOBS
(N = 1,929)**



Other Includes:
Headquarters Staff NCO - 1%
Quality Assurance - 1%
Job Controller - 1%
Tech Training Instructor - 1%

FIGURE 1

Group Descriptions

The following paragraphs contain brief descriptions of the jobs and clusters identified through the career ladder structure analysis. Table 3 presents the relative time spent on duties by members of these specialty jobs and clusters. Selected background data for these jobs and clusters are provided in Table 4. Representative tasks for all the groups are contained in Appendix A.

I. NETWORK ADMINISTRATION CLUSTER (ST173). The 62 airmen within this cluster (3 percent of the survey sample) spend nearly half their time performing general electronic computer and switching maintenance and conducting troubleshooting procedures (see Table 3). Members of this cluster focus mainly on local area network (LAN) installation and maintenance. Sixty-eight percent of personnel in this cluster carry a 5-skill level, with 98 percent of members on active duty. They perform an average of 41 tasks, with 32 percent supervising other personnel. AD members average just over 9 years TAFMS, and have predominant paygrades of E-4 and E-5 (see Table 4). Distinctive tasks performed include:

- isolate malfunctions to LAN components, such as routers, servers, or hubs
- isolate malfunctions to LANs
- perform operational checks of local area network (LAN) components, such as routers, servers or hubs
- perform operational checks of LANs
- isolate malfunctions within LAN components, such as routers, servers, or hubs
- perform network management procedures
- discriminate between hardware and software failures
- connect or disconnect fiber optic cables to or from interface equipment
- remove or replace twisted-pair cables
- configure workstations

There are two distinct jobs within this cluster that are separated by their performance in specific duty areas. The Network Maintenance Job deals mostly with malfunction isolation, and removing/replacing faulty LAN hardware. Nearly half of members' time is spent troubleshooting and performing general maintenance. Members indicate their primary work area deals with the Base Network Control Center (BNCC). The predominant paygrades are E-4 and E-5, with 33 percent indicating they supervise other personnel.

Members of the Network Installation Job are focused primarily on the installation and maintenance of fiber optic cables, and performing site survey evaluations. Thirty-eight percent of their time is spent maintaining and troubleshooting cables, wires, or associated equipment.

Personnel in this job indicate their primary work areas as BNCC, Installation, and Field Maintenance. Predominant paygrades are E-4 and E-5, with 26 percent of members indicating they supervise personnel.

II. SMALL COMPUTER AND PERIPHERAL EQUIPMENT MAINTENANCE CLUSTER (ST113). The 254 airmen forming this job (13 percent of the survey sample) perform an average of 68 tasks and distinguish themselves by the scope and type of equipment they maintain. Members indicate they work on keyboards, printers, and power supplies. Typical tasks performed include:

- perform operational checks of keyboards
- remove or replace keyboards
- perform operational checks of printers
- discriminate between hardware and software failures
- isolate malfunctions to printers
- remove or replace printers
- isolate malfunctions to keyboards
- remove or replace power supplies
- bench check keyboards
- bench check printers
- perform operational checks of power supplies

The predominant paygrade of this job is E-4. Seventy percent of these airmen are AD, 24 percent are ANG, and 6 percent are AFRC personnel. AD members average just over 5 years in the career field and almost 7 years in service. Twenty-four percent report holding the 3-skill level and 54 percent the 5-skill level. Forty-four percent of personnel are in their first-enlistment, with only 15 percent indicating they supervise other personnel (see Table 4).

III. GENERAL COMPUTER AND SWITCHING MAINTENANCE CLUSTER (ST133). The 812 airmen forming this job (42 percent of the survey sample) represent the core job within the AFSC 2E2X1 career field. Members spend 45 percent of their time performing general maintenance, troubleshooting, and removing and replacing computer and switching equipment (see Table 3). Predominant paygrades are E-4 and E-5, with 77 percent AD, 22 percent ANG and 1 percent AFRC (see Table 4). AD members average 6 years in the career field and 8 years in service. Thirty-six percent of the AD personnel in this cluster are in their first-enlistment, and 40 percent indicate they supervise. Members average 190 tasks, the highest of all jobs/clusters identified, including:

- perform power-up or power-down procedures
- discriminate between hardware and software failures
- remove or replace power supplies
- perform operational checks of printers
- perform operational checks of power supplies
- isolate malfunctions to power supplies
- perform operational checks of keyboards
- connect or disconnect power, power panels, or equipment leads
- access core automated maintenance system (CAMS) menus and data screens
- perform operational checks of processors
- perform operational checks of processors

Four jobs were identified within the General Computer and Switching Maintenance Cluster. These jobs distinguish themselves by the types of equipment maintained and/or operational environment in which this equipment is maintained. The General Troubleshooting Job focuses mainly on general troubleshooting tasks that are expected of a basic AFSC 2E2X1 airman. While this job represents the foundation of basic competencies required within this career field, the other three jobs are much more focused in nature.

Members of the Tactical/Mobile Operations Job distinguish themselves by maintaining operational equipment, often in deployed locations. Members not only maintain this equipment, but must also be proficient in camouflaging the equipment, and the maintenance/use of chemical warfare personal protection equipment. Members also play an active role in palletizing mobility or contingency equipment for shipment.

Members of the STRATCOM Technician Job are unique in that the majority of their time is spent performing strategic communications-specific maintenance. Members in this job comprise the C-shred personnel within the career field, and are focused on missile maintenance. Much of this job entails isolating and repairing malfunctions within the launch control facility, as well as performing operational checks on such equipment. Personnel in this job have the highest MAJCOM representation in AFSPC.

Members of the Airborne Computer Maintenance Job encompass the B-shred personnel in the career field, and are focused mainly on AWACS maintenance, as well as aircraft simulator maintenance. Personnel in this job isolate malfunctions within this equipment, and perform required maintenance. The predominant MAJCOM for these personnel is ACC.

IV. COMBAT COMMUNICATIONS CLUSTER (ST127). Comprising 6 percent of the survey sample, these 119 airmen report spending the most time performing mobility and contingency activities (see Table 3). Members are 56 percent AD, 34 percent ANG (the highest guard representation of all jobs/clusters identified), and 10 percent AFRC (the highest concentration of AFRC personnel identified). Eighty-three percent of personnel in this cluster

hold the 5- or 7-skill level, with 28 percent indicating they supervise other personnel. The predominant paygrades are E-4 and E-5, with 36 percent of AD members in their first-enlistment. AD members average 5 1/2 years in the career field, and 8 years in service (see Table 4). They average 85 tasks, which include:

- erect camouflage nettings
- erect tents
- prepare electronic computer or switching systems for operation at deployed locations
- participate in convoy exercises
- perform predeployment inspections of electronic computer or switching systems equipment
- operate M-series vehicles during contingency exercises
- palletize mobility or contingency equipment for shipment or movement
- set up or tear down shelters

There are three distinct jobs within this cluster that are separated by the number of tasks performed, and the number of supervisors. The Telephone Switch Maintenance Job is defined by a high amount of time spent maintaining handsets, headsets, or telephones. Personnel list switching maintenance as their primary work area. Of the three jobs identified in this cluster, members of the Telephone Switch Maintenance Job have the highest concentration of ANG personnel. AD members average 4 years in the career field and over 5 years in the service. Nine percent of members indicate supervising personnel.

The Mobility Operations Job is similar to the Tactical/Mobile Operations Job mentioned in the previous cluster, but differentiates itself by the relative time spent by personnel performing mobility/contingency activities. Members of the Mobility Operations Job spend nearly 40 percent of their time performing mobility and contingency operations. Members also indicate a primary work area of MCE maintenance, which comprises the A-shred personnel of the AFSC 2E2X1 career field. AD members average 5 years in the career field, and 8 years in service. Twenty-eight percent of members indicate supervising personnel.

The Combat Communications NCOIC Job performs less of the technical tasks described in the Telephone Switch Maintenance and Mobility Operations jobs, and more of the supervisory functions. Fifty percent of members indicate they supervise personnel and AD members, average 7 years in the career field and nearly 11 years in service. Members also indicate a primary work area of job control, and consequently spend a large amount of time working with CAMS.

V. SUPERVISORY CLUSTER (ST228). The 267 members of this cluster (comprising 14 percent of the survey sample) spend nearly half of their time performing management and supervisory activities (see Table 3). The members of this cluster range

anywhere from first-line supervisors, to workcenter supervisors, to section supervisors. As expected, members in this cluster show a significant decrease in the technical nature of task performance, and focus more on supervisory, management, and training. Representative tasks include:

- supervise military personnel
- counsel subordinates concerning personal matters
- determine or establish work assignments or priorities
- conduct supervisory performance feedback sessions
- participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting
- write recommendations for awards or decorations
- evaluate personnel for compliance with performance standards
- inspect personnel for compliance with military standards
- establish performance standards for subordinates
- assign personnel to work areas or duty positions
- write performance reports or supervisory appraisals

The predominant paygrades of these members are E-6 and E-7. Ninety-two percent of these airmen are AD, 6 percent ANG, and 2 percent AFRC. The AD members of this job average over 12 years in the career field and just under 16 years in service. Ninety percent of members indicate they supervise personnel, which is the highest of any job/cluster identified. Nineteen percent are assigned to units overseas (see Table 4).

VI. HEADQUARTERS STAFF NCO (ST337). The 12 airmen forming this job (1 percent of the survey sample) represent the senior members of the career ladder. Members of this job perform higher-level managerial-type tasks such as logistic and budget requirements. They spend 61 percent of their time performing management and supervisory activities, the most of all jobs/clusters identified. They perform an average of 60 tasks (see Table 4), including:

- participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting
- plan briefings, conferences, or workshops
- draft agenda for general meetings, such as staff meetings, briefings, conferences, or workshops
- plan equipment replacement programs
- determine or establish logistics requirements, such as personnel, equipment, tools, parts, supplies, or workspace
- conduct general meetings, such as staff meetings, briefings, conferences, or workshops

- coordinate host-tenant or interservice agreements with appropriate agencies
- write minutes of briefings, conferences, or meetings
- evaluate budget requirements

Fifty-eight percent of these members hold a 7-skill level and 33 percent hold the 9-skill level. The average time in the career ladder is 15 years, with an average 18 years in service, the highest of all jobs/clusters identified. The predominant paygrades of this job are E-6, E-7, and E-8. One hundred percent of the members are AD. Furthermore, 58 percent of these members report they are assigned within the United States, and 42 percent indicate they supervise personnel (see Table 3).

VII. QUALITY ASSURANCE JOB (ST438). These 14 airmen (1 percent of the survey sample) perform typical quality and safety inspections throughout the AFSC 2E2X1 career ladder. Over half of their time is spent doing managerial, supervisory, and maintenance management activities (see Table 3). Distinctive tasks performed include:

- conduct safety inspections of equipment or facilities
- access core automated maintenance system (CAMS) menus and data screens
- retrieve CAMS listings or reports
- write inspection reports
- evaluate safety or security programs
- analyze CAMS data
- update personnel data files in CAMS
- evaluate personnel for compliance with performance standards
- evaluate effectiveness of training programs, plans, or procedures
- maintain TO libraries

One hundred percent of these airmen are AD. Sixty-four percent hold the 5-skill level. The predominant paygrades are E-4, E-5, and E-6, with an average of almost 9 years in the career ladder and 10 years in service (see Table 4). Twenty-one percent indicate they supervise personnel, and 7 percent are in their first-enlistment (see Table 4).

VIII. JOB CONTROLLER (ST465). The 13 airmen that make up this job (1 percent of the survey sample) spend nearly half their time performing maintenance management activities (see Table 3). Consequently, Job Controllers spend much time accessing/using CAMS, assigning job control numbers, and tracking the progress of maintenance performed and pending within the AFSC 2E2X1 career ladder. Members perform an average of 32 tasks, the most frequent of those being:

- review preventive maintenance schedules
- analyze CAMS data
- access core automated maintenance system (CAMS) menus and data screens
- retrieve CAMS listing or reports
- verify CAMS products
- update maintenance data collection (MDC) data using CAMS
- analyze equipment outages or malfunction reports
- assign job control numbers
- adjust daily maintenance plans to meet operational commitments
- update historical reports in CAMS
- clear Red-X conditions
- dispatch crews to work projects

Fifty-four percent of Job Controllers indicated they are assigned to bases within the United States. Sixty-two percent of members hold the 5-skill level, and 23 percent are 5-skill level C-shred personnel. AD members average nearly 6 years in the career field, and 6 1/2 years in service. Thirty-eight percent of Job Controllers are in their first-enlistment, with 15 percent indicating they supervise personnel (see Table 4).

IX. TECHNICAL TRAINING INSTRUCTOR JOB (ST464). The 20 airmen who make up this job (1 percent of the survey sample) are typical of any instructor. They spend 65 percent of their time performing training activities (see Table 3). Members of this job are concerned with updating, revising, and writing effective training plans and programs for incoming AFSC 2E2X1 personnel. They perform an average of 34 tasks, with the most significant being:

- conduct formal course classroom training
- develop formal course curricula, plans of instruction (POIs), or specialty training standards (STSs)
- develop training materials or aids
- evaluate progress of trainees
- personalize lesson plans
- develop performance tests
- write test questions
- administer or score tests
- inspect training materials or aids for operation or suitability
- maintain training record or files

Ninety-five percent of Technical Training Instructors are assigned to bases within the United States, with 45 percent holding the 7-skill level, and 35 percent holding the 5-skill level. Ninety-five percent are AD, and the remaining 5 percent are in the AFRC. Predominant paygrades range from E-5 to E-7, with only 5 percent in their first-enlistment. AD members average 10 1/2 years in the career field and 13 years in service, with 20 percent indicating they supervise personnel (see Table 4).

Comparison to Previous Study

Table 5 lists the jobs identified in this report and compares them to the jobs of the 1993 and 1990 reports. Eight of the nine jobs/clusters identified in the current survey were identified in the two previous reports. The Network Administration Cluster was the only job not previously identified. The AFSC 305X4 Electronic Computer and Switching Systems career field was redesignated AFSC 2E2X1 in October 1993. In addition, AFSC 2E7X2, Missile Control Communications Systems, merged with the AFSC 2E2X1 career field in April 1995. The current AFSC 2E2X1 report reflects these changes.

TABLE 3

RELATIVE PERCENT TIME SPENT ON DUTIES BY SPECIALTY JOBS

DUTIES	NETWORK ADMIN CLUSTER (ST1173) (N=62)	SM COMP & PERIPH EQUIP MAINT CLUSTER (ST113) (N=254)	GEN COMP AND SWITCH MAINT CLUSTER (ST133) (N=812)	COMBAT COMM CLUSTER (ST127) (N=119)
A PERFORMING GENERAL ELECTRONIC COMPUTER AND SWITCHING SYSTEMS MAINTENANCE	24	27	17	15
B PERFORMING GENERAL PREVENTIVE MAINTENANCE INSPECTIONS (PMIs) ON EQUIPMENT OR COMPONENTS	2	7	6	4
C PERFORMING GENERAL ALIGNMENTS OR ADJUSTMENTS	*	3	3	1
D PERFORMING GENERAL TROUBLESHOOTING PROCEDURES	22	20	16	10
E REMOVING OR REPLACING GENERAL EQUIPMENT OR COMPONENTS	5	17	12	7
F PERFORMING GENERAL CORROSION CONTROL ACTIVITIES	*	2	3	3
G MAINTAINING CABLES, WIRING, OR ASSOCIATED EQUIPMENT	10	5	6	6
H MAINTAINING FIBER OPTIC CABLE SYSTEMS	11	1	1	*
I MAINTAINING HANDSETS, HEADSETS, OR TELEPHONES	*	1	3	7
J PERFORMING MODULAR CONTROL EQUIPMENT (MCE) SPECIFIC MAINTENANCE	*	*	3	*
K PERFORMING AIRBORNE COMPUTER SPECIFIC MAINTENANCE	0	*	3	*
L PERFORMING STRATEGIC COMMUNICATIONS (STRATCOM) SPECIFIC MAINTENANCE	*	*	2	*
M PERFORMING OPERATOR ACTIVITIES	8	3	2	2
N PERFORMING MAINTENANCE MANAGEMENT ACTIVITIES	1	3	5	4
O PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES	2	2	5	26
P PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	8	3	5	5
Q PERFORMING TRAINING ACTIVITIES	4	2	3	2
R PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	*	2	2	3
S PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	2	4	4	4

- Columns may not total 100 percent due to rounding

* Less than 1 percent

TABLE 3 (CONTINUED)

RELATIVE PERCENT TIME SPENT ON DUTIES BY SPECIALTY JOBS

DUTIES	SUPER-VISORY CLUSTER (ST228) (N=267)	HQ STAFF		QUALITY ASSURANCE JOB (ST438) (N=14)	JOB CONTROLLER (ST465) (N=13)	TECHNICAL TRAINING INSTRUCTOR JOB (ST464) (N=20)
		NCO JOB (ST337) (N=12)	NCO JOB (ST337) (N=12)			
A PERFORMING GENERAL ELECTRONIC COMPUTER AND SWITCHING SYSTEMS MAINTENANCE	8	4	4	4	13	9
B PERFORMING GENERAL PREVENTIVE MAINTENANCE INSPECTIONS (PMIs) ON EQUIPMENT OR COMPONENTS	1	0	*	*	*	0
C PERFORMING GENERAL ALIGNMENTS OR ADJUSTMENTS	*	0	*	*	*	*
D PERFORMING GENERAL TROUBLESHOOTING PROCEDURES	5	1	1	1	2	2
E REMOVING OR REPLACING GENERAL EQUIPMENT OR COMPONENTS	4	*	*	*	*	1
F PERFORMING GENERAL CORROSION CONTROL ACTIVITIES	1	*	12	12	1	0
G MAINTAINING CABLES, WIRING, OR ASSOCIATED EQUIPMENT	2	1	*	*	*	1
H MAINTAINING FIBER OPTIC CABLE SYSTEMS	1	0	*	*	*	0
I MAINTAINING HANDSETS, HEADSETS, OR TELEPHONES	*	0	1	1	*	1
J PERFORMING MODULAR CONTROL EQUIPMENT (MCE) SPECIFIC MAINTENANCE	*	0	0	0	0	0
K PERFORMING AIRBORNE COMPUTER SPECIFIC MAINTENANCE	*	0	0	0	0	*
L PERFORMING STRATEGIC COMMUNICATIONS (STRATCOM) SPECIFIC MAINTENANCE	*	0	2	2	1	*
M PERFORMING OPERATOR ACTIVITIES	1	2	*	*	0	3
N PERFORMING MAINTENANCE MANAGEMENT ACTIVITIES	7	3	19	19	46	1
O PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES	4	0	5	5	11	1
P PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	46	61	34	34	6	12
Q PERFORMING TRAINING ACTIVITIES	10	7	8	8	1	65
R PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	4	16	10	10	6	3
S PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	5	5	4	4	11	2

- Columns may not total 100 percent due to rounding

* Less than 1 percent

TABLE 4

SELECTED BACKGROUND DATA FOR SPECIALTY JOBS

	NETWORK ADMIN CLUSTER (ST1173) (N=62)		SM COMP & PERIPH EQUIP MAINT CLUSTER (ST113) (N=254)		GEN COMP AND SWITCH MAINT CLUSTER (ST133) (N=812)		COMBAT COMM CLUSTER (ST127) (N=119)	
	NUMBER IN GROUP	PERCENT OF SAMPLE	NUMBER IN GROUP	PERCENT OF SAMPLE	NUMBER IN GROUP	PERCENT OF SAMPLE	NUMBER IN GROUP	PERCENT OF SAMPLE
NUMBER IN GROUP	62	3%	254	13%	812	42%	119	6%
PERCENT OF SAMPLE		95%		83%		87%		97%
PERCENT IN CONUS								
DAFSC DISTRIBUTION:								
2E231	11%		24%		10%		16%	
2E231B	0		2%		8%		0	
2E231C	2%		3%		6%		0	
2E251	68%		54%		43%		61%	
2E251A	0		0		1%		0	
2E251B	0		3%		6%		0	
2E251C	2%		1%		6%		1%	
2E271	18%		13%		20%		22%	
2E291	0		0		0		1%	
COMPONENT STATUS:								
ACTIVE DUTY	98%		70%		77%		56%	
AIR NATIONAL GUARD	2%		24%		22%		34%	
AIR FORCE RESERVE	0		6		1		10	
PREDOMINANT GRADE(S)								
AVERAGE MONTHS IN CAREER FIELD*	E-4, E-5	87	E-3, E-4, E-5	64	E-4, E-5	72	E-4, E-5	65
AVERAGE MONTHS IN SERVICE*		112		80		94		95
PERCENT IN FIRST ENLISTMENT (1-48 MOS TAFMS)*		24%		44%		36%		36%
PERCENT SUPERVISING		32%		15%		40%		28%
AVERAGE NUMBER OF TASKS PERFORMED		41		68		190		85

*Active Duty only

TABLE 4 (CONTINUED)

SELECTED BACKGROUND DATA FOR SPECIALTY JOBS

	SUPER- VISORY CLUSTER (ST228) (N=267)	HQ STAFF NCO JOB (ST337) (N=12)	QUALITY ASSURANCE JOB (ST438) (N=14)	JOB CON- TROLLER JOB (ST465) (N=13)	TECHNICAL TRAINING INSTRUCTOR JOB (ST464) (N=20)
NUMBER IN GROUP	267	12	14	13	20
PERCENT OF SAMPLE	14%	1%	1%	1%	1%
PERCENT IN CONUS	81%	58%	93%	54%	95%

NUMBER IN GROUP
PERCENT OF SAMPLE
PERCENT IN CONUS

DAFSC DISTRIBUTION:

2E231	0	0	0	8%	0
2E231B	0	0	0	0	0
2E231C	0	0	7%	0	0
2E251	27%	8%	64%	62%	35%
2E251A	0	0	0	0	0
2E251B	1%	0	0	0	10%
2E251C	1%	0	21%	23%	10%
2E271	64%	58%	7%	8%	45%
2E291	6%	33%	0	0	0

COMPONENT STATUS:

ACTIVE DUTY	92%	100%	100%	92%	95%
AIR NATIONAL GUARD	6%	0	0	8%	0
AIR FORCE RESERVE	2%	0	0	0	5%

PREDOMINANT GRADE(S)

	E-6, E-7	E-6, E-7, E-8	E-4, E-5, E-6	E-3, E-4, E-5	E-5, E-6, E-7
AVERAGE MONTHS IN CAREER FIELD*	147	183	105	69	127
AVERAGE MONTHS IN SERVICE*	191	216	118	77	155
PERCENT IN FIRST ENLISTMENT (1-48 MOS TAFMS)*	0	0	7%	38%	5%
PERCENT SUPERVISING	90%	42%	21%	15%	20%
AVERAGE NUMBER OF TASKS PERFORMED	111	60	54	32	34

*Active Duty only

TABLE 5

SPECIALTY JOB COMPARISON BETWEEN CURRENT, 1993, AND 1990 SURVEYS

CURRENT SURVEY (N=1,929)	1993 AFSC 305X4 SURVEY (N=1,804)	1990 AFSC 362X3 SURVEY (N=83)
NETWORK ADMINISTRATION CLUSTER	NO SIMILAR JOB IDENTIFIED	NO SIMILAR JOB IDENTIFIED
SMALL COMPUTER AND PERIPHERAL EQUIPMENT MAINTENANCE CLUSTER	SMALL COMPUTER MAINTENANCE	NO SIMILAR JOB IDENTIFIED
GENERAL COMPUTER AND SWITCHING MAINTENANCE CLUSTER	COMPUTER MAINTENANCE TECHNICIAN	MISSILE COMMUNICATIONS SYSTEM REPAIR CLUSTER
COMBAT COMMUNICATIONS CLUSTER	MOBILE SYSTEMS MAINT.	NO SIMILAR JOB IDENTIFIED
SUPERVISORY CLUSTER	WORKCENTER SUPERVISORS	SUPERVISORY CLUSTER
HEADQUARTERS STAFF NCO	STAFF/SENIOR NCOs	NO SIMILAR JOB IDENTIFIED
QUALITY ASSURANCE	QUALITY CONTROL	QUALITY CONTROL
JOB CONTROLLER	JOB CONTROL	JOB CONTROL
TECHNICAL TRAINING INSTRUCTOR	TECHNICAL INSTRUCTORS	NO SIMILAR JOB IDENTIFIED

ANALYSIS OF DAFSC GROUPS

An analysis of DAFSC groups, in conjunction with the analysis of the career ladder structure, is an important part of each occupational survey. The DAFSC analysis identifies differences in tasks performed at the various skill levels. This information may then be used to evaluate how well career ladder documents, such as AFMAN 36-2108 *Airman Classification* specialty description and the Career Field Education and Training Plan, reflect what career ladder personnel are actually doing in the field.

The distribution of skill-level groups across career ladder jobs and clusters is displayed in Tables 6 and 7, while Tables 8 and 9 offer another perspective by displaying the relative percent time spent on each duty across skill-level groups. These tables reflect the distribution of AD, ANG, and AFRC personnel. A typical pattern of progression is noted within the career ladder. Personnel at the 3- and 5-skill levels work in technical jobs and spend most of their time on technical tasks. As incumbents move up to the 7-skill level, higher percentages work in the supervisory jobs, but many personnel still spend some time performing technical tasks. At the 9-skill level, individuals have moved away from the technical tasks completely and are performing supervisory and management functions.

AD Skill-Level Descriptions

DAFSC 2E231. Representing 11 percent of the survey sample, these 207 AD airmen perform an average of 96 tasks. Thirty-seven percent of 2E231 personnel identified are in the General Computer and Switching Maintenance Cluster, which represents the core job within the career field (see Table 6). Twenty-nine percent perform in the Small Computer and Peripheral Equipment Maintenance Cluster (see Table 6).

Table 8 reflects the percent time spent on duties by DAFSC 2E231 personnel. Their time is mainly devoted to technical duties such as general computer maintenance, troubleshooting, removing or replacing general equipment, and the performance of preventive maintenance inspections (PMIs). Representative tasks performed by these members are listed in Table 10.

DAFSC 2E231B. The 77 AD members of this group perform an average of 120 tasks and account for 4 percent of the survey sample. While 90 percent work in the General Computer and Switching Maintenance Cluster (see Table 6), members of this DAFSC specialize in Airborne Computer Maintenance. Specifically, they perform maintenance on AWACS equipment, which is consistent with their B-shred identifier.

Table 8 provides the percent time spent on duties for the airmen of the DAFSC 2E231B. Twenty-one percent of their time is spent performing airborne computer specific maintenance. Another 50 percent of their time is spent performing a combination of troubleshooting, removing

and replacing general equipment, and general electronic computer and switching systems maintenance duties (see Table 8). Table 11 lists representative tasks performed by DAFSC 2E231B personnel.

DAFSC 2E231C. These 61 AD members perform an average of 146 tasks and represent 3 percent of the survey sample. Table 8 shows 80 percent of members are in the General Computer and Switching Maintenance Cluster, and another 13 percent are in the Small Computer and Peripheral Maintenance Cluster.

Table 8 reflects the percent time spent on duties by DAFSC 2E231C members. These personnel spend their time performing general computer maintenance, removing or replacing general equipment, and troubleshooting. However, these airmen also spend 10 percent of their time performing strategic communications-specific maintenance, which is appropriate for C-shred members. Table 12 shows a listing of representative tasks performed by 2E231C personnel. As with the other 3-skill level personnel, these tasks are mainly general and technical in nature.

DAFSC 2E251. These 660 members (34 percent of the survey sample) perform an average of 116 tasks and represent the core of the career field. Table 6 indicates 41 percent of AD 5-skill level personnel work in the General Computer and Switching Maintenance Cluster. An additional 13 percent perform in the Small Computer and Peripheral Equipment Maintenance Cluster.

Table 8 reflects the percent time spent on duties by AD 2E251 personnel. The majority of AD 5-skill level personnel's time is spent on duties A through E, which represent the bulk of the basic technical work associated with the 2E2X1 career field. Table 13 shows representative tasks performed by AD DAFSC 2E251 personnel, while Table 14 illustrates the tasks which best differentiate between AD 2E231 and 2E251 personnel. Five-skill level personnel perform all the tasks 3-skill level personnel perform, with a higher amount performing more supervisory-type tasks than their 3-skill level counterparts.

DAFSC 2E251A. These 8 AD personnel represent less than 1 percent of the survey sample and perform an average of 210 tasks. One-hundred percent of members are in the General Computer and Switching Maintenance Cluster (see Table 6).

Table 8 reflects percent time spent on duties by DAFSC 2E251A personnel. While members display a fairly even distribution of time spent across all duties, they spend 13 percent of their time performing MCE-specific maintenance, consistent with their A-shred AWACS. The only two duty areas where no performance was indicated came under airborne computer maintenance and STRATCOM specific maintenance, which are associated with B- and C-shred personnel, respectively. Table 15 lists representative tasks performed by DAFSC 2E251A personnel.

DAFSC 2E251B. These 59 AD personnel represent 3 percent of the survey sample and perform an average of 126 tasks. Seventy-three percent of members indicate they are in the General Computer and Switching Maintenance Cluster, and an additional 14 percent are in the Small Computer and Peripheral Maintenance Cluster (see Table 6).

In keeping with their B-shred, these members perform airborne computer maintenance activities. Sixteen percent of personnel indicate the performance of airborne computer specific maintenance, second only to 3-skill level B-shred personnel who spend 21 percent of their time dealing with airborne computer specific maintenance (see Table 8).

Table 16 lists representative tasks performed by AD 2E251B personnel. Table 17 shows tasks which best differentiate between 2E231B and 2E251B personnel. This table indicates the main difference between these two groups is that 3-skill level B-shred personnel perform more technical tasks (e.g., isolating malfunctions). Five-skill level B-shred personnel, however, are more likely to conduct OJT, provide feedback sessions, and supervise military personnel.

DAFSC 2E251C. These 69 AD personnel represent 4 percent of the survey sample and perform an average of 147 tasks. Sixty-seven percent of members indicate their primary job is contained within the General Computer and Switching Maintenance Cluster (see Table 6).

Consistent with their C-shred, these personnel perform STRATCOM activities. In fact, only 3- and 5-skill level C-shred personnel indicate any significant performance of STRATCOM specific maintenance. The highest concentration of effort for both the 3- and 5-skill level C-shred personnel comes under the duty title of general electronic computer and switching systems maintenance (see Table 8).

Table 18 lists representative tasks performed by 2E251C personnel. A majority of these personnel spend time working with CAMS. Table 19 shows the tasks which best differentiate between 2E251C and 2E231C personnel. As with B-shred personnel, the main difference among the two C-shred groups comes in the performance of technical versus supervisory tasks. 2E231C personnel perform more technical activities such as the removal or replacing of equipment, while 2E251C personnel perform more supervisory-type tasks.

DAFSC 2E271. These 332 members (representing 17 percent of the survey sample) perform an average of 107 tasks. Table 6 shows 46 percent of AD 2E271 personnel work in the Supervisory Cluster, while another 19 percent perform in the General Computer and Switching Maintenance Cluster.

Table 8 shows the relative percent time spent on duties by AD 2E271 personnel. Forty percent of their time is spent performing management and supervisory activities typical of 7-skill level personnel. Table 20 lists representative tasks performed by AD 2E271 personnel, while Table 21 highlights those tasks which best differentiate 5-skill level personnel from 7-skill level

personnel. Five-skill level personnel, while performing some supervisory tasks, still have a significant technical aspect to their jobs. Seven-skill level personnel, on the other hand, distinguish themselves by performing certain higher-level supervisory tasks.

DAFSC 2E291. These 22 AD members, comprising just over 1 percent of the survey sample, perform an average of 64 tasks. Table 6 shows 50 percent of AD 2E291 personnel working in the Supervisory Cluster, with another 18 percent in the Headquarters Staff NCO job. Table 8 lists relative time spent on duties by 9-skill level AD personnel. Sixty-nine percent of their time is spent performing managerial or supervisory activities.

Table 22 lists representative tasks performed by AD 2E291 personnel. Higher-level supervisory functions clearly separate these personnel from the rest of the 2E2X1 career ladder. Table 23 lists those tasks best differentiating AD 2E271 and 2E291 personnel. This table indicates 9-skill level AD personnel perform more high level supervisory functions than their 7-skill level counterparts.

ANG Skill-Level Descriptions

DAFSC 2E251. These 183 ANG members (accounting for 9 percent of the survey sample) perform an average of 123 tasks. Table 7 shows the distribution of ANG 5-skill level personnel across identified jobs/clusters. Forty-five percent of ANG 5-skill level personnel are located in the General Computer and Switching Maintenance Cluster, while another 21 percent are located in the Small Computer and Peripheral Equipment Maintenance Cluster.

Table 9 shows the relative percent time spent on duties by ANG 5-skill level personnel. Over half of their time is spent performing general computer maintenance, troubleshooting, and removing or replacing general computer equipment. Table 24 lists representative tasks performed by ANG 2E251 personnel.

DAFSC 2E271. These 174 ANG members (accounting for 9 percent of the survey sample) perform an average of 172 tasks. Table 7 shows the distribution of ANG 7-skill level personnel across identified jobs/clusters. Fifty-six percent of ANG 7-skill level personnel perform in the General Computer and Switching Maintenance Cluster, while another 13 percent perform in the Small Computer and Peripheral Equipment Maintenance Cluster.

Table 9 shows the relative percent time spent on duties by ANG 7-skill level personnel and Table 25 lists representative tasks performed by ANG 7-skill level personnel.

DAFSC 2E291. These 6 ANG members (accounting for less than 1 percent of the survey sample) perform an average of 103 tasks. Table 7 shows 100 percent of ANG 9-skill level personnel are in the Supervisory Cluster, with 55 percent of their time spent performing managerial or supervisory activities (see Table 9). Table 26 lists representative tasks performed by ANG 2E291 personnel.

AFRC Skill-Level Descriptions

DAFSC 2E251. These 36 AFRC members (accounting for 2 percent of the survey sample) perform an average of 48 tasks. Thirty-three percent of members are located in the Small Computer and Peripheral Equipment Maintenance Cluster, while another 19 percent are located in the Combat Communications Cluster (see Table 7).

Table 9 shows the relative percent of time spent on duties by AFRC 2E251 personnel. Over half of their time is spent performing general computer maintenance, troubleshooting, and removing or replacing general computer equipment. Table 27 lists representative tasks performed by AFRC 2E251 personnel.

DAFSC 2E271. These 24 AFRC members (accounting for 1 percent of the survey sample) perform an average of 128 tasks. Fifty-five percent of members are located in the General Computer and Switching Maintenance Cluster, while another 20 percent are in the Small Computer and Peripheral Equipment Maintenance Cluster (see Table 7).

Table 9 shows an emphasis on managerial or supervisory, mobility and contingency, and general computer maintenance duties. Table 28 lists representative tasks performed by AFRC 2E271 personnel.

Comparison of AD, ANG and AFRC Skill-Level Groups

DAFSC 2E251. Tables 6 and 7 indicate 41 percent of AD 5-skill level personnel work in the General Computer and Switching Maintenance Cluster, along with 45 percent of ANG 5-skill level personnel. Five-skill level AFRC personnel distinguish themselves by showing 33 percent representation in the Small Computer and Peripheral Equipment Maintenance Cluster, and 19 percent in the Combat Communications Cluster (see Table 7).

Tables 8 and 9 reflect the percent time spent on duties by AD, ANG and AFRC DAFSC 2E251 personnel. AD, ANG and AFRC personnel are very similar in their performance of duties A, D, and E, with the most significant difference coming with AFRC personnel's 14 percent time spent performing mobility and contingency activities (see Table 9).

Table 29 shows those tasks which best differentiate between AD and ANG DAFSC 2E251 personnel. AD 5-skill level personnel perform more supervisory tasks, while ANG personnel indicate a higher emphasis on switch maintenance than their AD counterparts.

Table 30 lists those tasks which best differentiate between AD and AFRC 2E251 personnel. The main difference between these two groups comes in the AD members' performance of PMIs and CAMS interaction, and AFRC members' emphasis on mobility/contingency related tasks.

DAFSC 2E271. Table 6 shows 46 percent of AD 2E271 personnel work in the Supervisory Cluster, while ANG and AFRC 2E271 personnel are most highly concentrated in the General Computer and Switching Maintenance Cluster (see Table 7).

Table 8 shows the relative percent time spent on duties by AD 2E271 personnel. Forty-percent of their time is spent performing management and supervisory activities typical of 7-skill level personnel. Table 9 shows the relative time spent on duties by ANG and AFRC 2E271 personnel. Both groups display a very diverse performance of duties, with no specific area showing a much higher percentage performing than others.

Table 31 provides a look at what makes AD 2E271 airmen differ from 2E271 ANG airmen. AD 2E271 personnel once again distinguish themselves by the amount of supervisory activities performed, whereas ANG 2E271 personnel separate themselves by certain mobility and/or contingency activities performed.

Table 32 shows the most significant differences between AD and AFRC 2E271 personnel. As with their ANG counterparts, AFRC 2E271 personnel distinguish themselves both by the lack of emphasis on supervisory tasks, and by the significant performance of mobility and/or contingency activities.

DAFSC 2E291. Table 6 shows 50 percent of AD 2E291 personnel working in the Supervisory Cluster, with another 18 percent working in the Headquarters Staff NCO job. Table 7 shows all 2E291 ANG personnel within the sample are members of the Supervisory Cluster. Sixty-nine percent of AD 2E291 skill-level personnel's time is spent on managerial and supervisory activities compared to 55 percent of ANG 2E291 personnel's time (see Tables 8 and 9).

Table 33 compares ANG 2E291 personnel to AD 2E291 personnel. AD 2E291 personnel do more brief planning, drafting and evaluating of budget requirements, and reviewing drafts of policy directives, while ANG 2E291 personnel show higher emphasis on assigning formal course instructors, evaluating progress of trainees, and procuring training aids.

Summary

Progression in the Electronic Computer and Switching Systems career ladder follows a regular pattern of highly technical focus at the lower skill levels, with a broadening into supervision and management at the 7-skill level. An emphasis is clearly seen in performing primarily the core job of the career ladder at the 5- and 7-skill levels. Craftsmen at the 7-skill level are beginning to shift to supervisory jobs, but a good deal of their time is still spent in the technical arena. ANG and AFRC 7-skill level personnel spend a much higher percentage of their time performing technical tasks versus supervisory tasks than their AD counterparts.

TABLE 6

DISTRIBUTION OF AD SKILL LEVEL DAFSC GROUP MEMBERS ACROSS SPECIALTY JOBS
(PERCENT RESPONDING)

SPECIALTY JOBS	2E231 (N=207)	2E231B (N=77)	2E231C (N=61)	2E251 (N=660)	2E251A (N=8)	2E251B (N=59)	2E251C (N=69)	2E271 (N=332)	2E291 (N=22)
I. NETWORK ADMINISTRATION CLUSTER	3	0	2	6	0	0	1	3	0
II. SMALL COMPUTER AND PERIPHERAL EQUIPMENT MAINTENANCE CLUSTER	29	5	13	13	0	14	3	3	0
III. GENERAL COMPUTER AND SWITCHING MAINTENANCE CLUSTER	37	90	80	41	100	73	67	19	5
IV. COMBAT COMMUNICATIONS CLUSTER	9	0	0	6	0	0	1	2	5
V. SUPERVISORY CLUSTER	*	0	0	11	0	5	3	46	50
VI. HEADQUARTERS STAFF NCO	0	0	0	*	0	0	0	2	18
VII. QUALITY ASSURANCE	0	0	2	1	0	0	4	*	0
VIII. JOB CONTROL	*	0	0	1	0	0	4	0	0
XI. TECHNICAL TRAINING INSTRUCTOR	0	0	0	1	0	3	3	2	0
X. NOT GROUPED	22	5	5	20	0	5	14	23	22

TABLE 7

DISTRIBUTION OF ANG AND AFRC SKILL LEVEL DAFSC GROUP MEMBERS ACROSS SPECIALTY JOBS
(PERCENT RESPONDING)

<u>SPECIALTY JOBS</u>	<u>ANG</u>		<u>AFRC</u>	
	2E251 (N=183)	2E271 (N=174)	2E251 (N=36)	2E271 (N=24)
I. NETWORK ADMINISTRATION CLUSTER	0	1	0	3
II. SMALL COMPUTER AND PERIPHERAL EQUIPMENT MAINTENANCE CLUSTER	21	13	33	20
III. GENERAL COMPUTER AND SWITCHING MAINTENANCE CLUSTER	45	56	6	55
IV. COMBAT COMMUNICATIONS CLUSTER	14	8	19	7
V. SUPERVISORY CLUSTER	0	6	3	*
VI. HEADQUARTERS STAFF NCO	0	0	0	0
VII. QUALITY ASSURANCE	0	0	0	*
VIII. JOB CONTROL	0	1	0	1
XI. TECHNICAL TRAINING INSTRUCTOR	0	0	0	*
X. NOT GROUPED	20	15	39	14

TABLE 8

RELATIVE PERCENT TIME SPENT ON DUTIES BY AD SKILL LEVEL DAFSC GROUPS

DUTIES	2E231 (N=207)	2E231B (N=77)	2E231C (N=61)	2E251 (N=660)	2E251A (N=8)	2E251B (N=59)	2E251C (N=69)	2E271 (N=332)	2E291 (N=22)
A PERFORMING GENERAL ELECTRONIC COMPUTER AND SWITCHING SYSTEMS MAINTENANCE	23	17	21	18	12	15	16	9	2
B PERFORMING GENERAL PREVENTIVE MAINTENANCE INSPECTIONS (PMIs) ON EQUIPMENT OR COMPONENTS	10	5	6	5	6	5	3	2	*
C PERFORMING GENERAL ALIGNMENTS OR ADJUSTMENTS	3	2	4	2	1	2	3	1	0
D PERFORMING GENERAL TROUBLESHOOTING PROCEDURES	15	18	13	14	13	16	11	7	1
E REMOVING OR REPLACING GENERAL EQUIPMENT OR COMPONENTS	12	15	14	9	10	14	10	4	*
F PERFORMING GENERAL CORROSION CONTROL ACTIVITIES	3	2	5	2	5	2	4	1	*
G MAINTAINING CABLES, WIRING, OR ASSOCIATED EQUIPMENT	6	2	6	5	5	3	5	2	*
H MAINTAINING FIBER OPTIC CABLE SYSTEMS	3	*	*	2	2	0	*	1	0
I MAINTAINING HANDSETS, HEADSETS, OR TELEPHONES	2	1	6	2	4	*	5	1	*
J PERFORMING MODULAR CONTROL EQUIPMENT (MCE) SPECIFIC MAINTENANCE	1	*	*	1	13	*	*	1	*
K PERFORMING AIRBORNE COMPUTER SPECIFIC MAINTENANCE	1	21	0	*	0	16	0	*	0
L PERFORMING STRATEGIC COMMUNICATIONS (STRATCOM) SPECIFIC MAINTENANCE	*	*	10	*	0	*	10	*	0
M PERFORMING OPERATOR ACTIVITIES	2	1	1	3	1	1	1	2	1
N PERFORMING MAINTENANCE MANAGEMENT ACTIVITIES	5	5	5	5	4	5	10	6	3
O PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES	6	2	1	6	10	2	1	4	5
P PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	1	1	1	11	6	6	7	40	69
Q PERFORMING TRAINING ACTIVITIES	1	1	1	6	2	6	6	10	8
R PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	2	1	3	3	3	2	3	6	8
S PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	3	4	4	5	3	5	5	4	3

* Indicates less than 1 percent

** Columns may not add to 100 percent due to rounding or nonresponse

TABLE 9

RELATIVE PERCENT TIME SPENT ON DUTIES BY ANG AND AFRC SKILL LEVEL DAFSC GROUPS

DUTIES	ANG 2E271 (N=174)		AFRC 2E251 (N=36)		AFRC 2E271 (N=24)	
	2E251 (N=183)	2E291 (N=6)	2E251 (N=36)	2E291 (N=6)	2E251 (N=36)	2E271 (N=24)
A PERFORMING GENERAL ELECTRONIC COMPUTER AND SWITCHING SYSTEMS MAINTENANCE	22	6	24	13		
B PERFORMING GENERAL PREVENTIVE MAINTENANCE INSPECTIONS (PMIs) ON EQUIPMENT OR COMPONENTS	5	*	2	2		
C PERFORMING GENERAL ALIGNMENTS OR ADJUSTMENTS	3	*	1	1		
D PERFORMING GENERAL TROUBLESHOOTING PROCEDURES	17	3	14	8		
E REMOVING OR REPLACING GENERAL EQUIPMENT OR COMPONENTS	14	3	13	8		
F PERFORMING GENERAL CORROSION CONTROL ACTIVITIES	3	1	*	2		
G MAINTAINING CABLES, WIRING, OR ASSOCIATED EQUIPMENT	8	1	12	7		
H MAINTAINING FIBER OPTIC CABLE SYSTEMS	1	*	1	*		
I MAINTAINING HANDSETS, HEADSETS, OR TELEPHONES	5	1	4	5		
J PERFORMING MODULAR CONTROL EQUIPMENT (MCE) SPECIFIC MAINTENANCE	3	*	0	*		
K PERFORMING AIRBORNE COMPUTER SPECIFIC MAINTENANCE	*	0	0	1		
L PERFORMING STRATEGIC COMMUNICATIONS (STRATCOM) SPECIFIC MAINTENANCE	*	0	*	0		
M PERFORMING OPERATOR ACTIVITIES	2	*	1	1		
N PERFORMING MAINTENANCE MANAGEMENT ACTIVITIES	2	5	1	3		
O PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES	9	3	14	14		
P PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	1	55	4	16		
Q PERFORMING TRAINING ACTIVITIES	1	14	1	9		
R PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	1	2	3	7		
S PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	2	6	5	4		

* Indicates less than 1 percent

** Columns may not add to 100 percent due to rounding or nonresponse

TABLE 10

REPRESENTATIVE TASKS PERFORMED BY AD 2E231 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=207)
A54 Perform power-up or power-down procedures	75
D205 Discriminate between hardware and software failures	68
A81 Perform operational checks of power supplies	67
A82 Perform operational checks of printers	66
A72 Perform operational checks of keyboards	66
E420 Remove or replace power supplies	65
E394 Remove or replace keyboards	65
A27 Connect or disconnect power, power panels, or equipment leads	63
N752 Access core automated maintenance system (CAMS) menus and data screens	62
B149 Perform PMIs on printers	61
B135 Perform PMIs on keyboards	58
D269 Isolate malfunctions to power supplies	57
D251 Isolate malfunctions to keyboards	57
D271 Isolate malfunctions to printers	54
E387 Remove or replace fuses	54
E423 Remove or replace printers	53
B131 Perform PMIs on display equipment, such as CRTs	52
G479 Isolate malfunctions to cables	52
A83 Perform operational checks of processors	50
F458 Inspect cables for corrosion	49
A1 Analyze equipment outages or malfunction reports	47
B148 Perform PMIs on power supplies	47
A68 Perform operational checks of display equipment	46
A43 Pack or tag components or spare parts	46
F457 Inspect cabinets for corrosion	45
B138 Perform PMIs on magnetic tape units	45
B121 Perform PMIs on blowers or cooling fans	43
C191 Adjust or align printers	42
H511 Connect or disconnect fiber optic cables to or from interface equipment	40
B124 Perform PMIs on cabinets, racks, or subfloors	40
A21 Bench check printers	39
N763 Retrieve CAMS listings or reports	39
N764 Review preventive maintenance schedules	37

TABLE 11

REPRESENTATIVE TASKS PERFORMED BY AD 2E231B PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=77)
A54 Perform power-up or power-down procedures	87
D269 Isolate malfunctions to power supplies	87
N752 Access core automated maintenance system (CAMS) menus and data screens	86
E420 Remove or replace power supplies	86
A81 Perform operational checks of power supplies	84
K620 Isolate malfunctions to airborne warning and control system (AWACS) mission simulator (MS) or mission avionics (MA) data processing systems	83
A45 Perform data destruct procedures	83
A82 Perform operational checks of printers	81
E363 Remove or replace core memory assemblies	79
K648 Perform preflight inspections of display equipment	78
A72 Perform operational checks of keyboards	78
D229 Isolate malfunctions to core memory assemblies	77
K661 Remove or replace magnetic drum units	77
A27 Connect or disconnect power, power panels, or equipment leads	75
K649 Perform preflight inspections of hard-disk subsystems (HDSs)	75
A63 Perform operational checks of core memory assemblies	75
K621 Isolate malfunctions to magnetic drum units	75
K636 Perform aircraft computer preflight inspections	74
K654 Perform preflight inspections on keyboards	74
K630 Isolate malfunctions within magnetic drum units to cards or subassemblies	73
K660 Remove or replace magnetic drum unit subassemblies	73
E410 Remove or replace multiplexers	73
A68 Perform operational checks of display equipment	71
K628 Isolate malfunctions within AWACS MS or MA data processing systems (DPSs)	71
D263 Isolate malfunctions to multiplexers	71
K651 Perform preflight inspections of maintenance or operator panels or consoles	70
A78 Perform operational checks of multiplexers	70

TABLE 12

REPRESENTATIVE TASKS PERFORMED BY AD 2E231C PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=61)
E420 Remove or replace power supplies	90
A82 Perform operational checks of printers	85
A54 Perform power-up or power-down procedures	85
D205 Discriminate between hardware and software failures	84
E353 Remove or replace blowers or cooling fans	82
B149 Perform PMIs on printers	80
A81 Perform operational checks of power supplies	80
A20 Bench check power supplies	79
F453 Apply corrosion preventive materials to equipment or supplies	77
E423 Remove or replace printers	75
A21 Bench check printers	74
B121 Perform PMIs on blowers or cooling fans	74
E387 Remove or replace fuses	74
N752 Access core automated maintenance system (CAMS) menus and data screens	70
D271 Isolate malfunctions to printers	69
F467 Remove corrosion from metal surfaces	69
D269 Isolate malfunctions to power supplies	69
F457 Inspect cabinets for corrosion	67
F458 Inspect cables for corrosion	67
A72 Perform operational checks of keyboards	67
A27 Connect or disconnect power, power panels, or equipment leads	66
B130 Perform PMIs on disc systems	66
C191 Adjust or align printers	66
A53 Perform patch panel procedures	66
A15 Bench check keyboards	66
E394 Remove or replace keyboards	66
A83 Perform operational checks of processors	64
F460 Inspect electronic drawers for corrosion	64
A67 Perform operational checks of disc systems	62
E349 Remove or replace batteries	62
E411 Remove or replace nonelectrical hardware, such as screws, nuts, ejectors, or covers	61

TABLE 13

REPRESENTATIVE TASKS PERFORMED BY AD 2E251 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=660)
D205 Discriminate between hardware and software failures	72
A54 Perform power-up or power-down procedures	69
A82 Perform operational checks of printers	64
A72 Perform operational checks of keyboards	59
N752 Access core automated maintenance system (CAMS) menus and data screens	58
D271 Isolate malfunctions to printers	58
E420 Remove or replace power supplies	58
E394 Remove or replace keyboards	56
A27 Connect or disconnect power, power panels, or equipment leads	55
A81 Perform operational checks of power supplies	55
D269 Isolate malfunctions to power supplies	55
E423 Remove or replace printers	54
Q891 Conduct OJT	53
D251 Isolate malfunctions to keyboards	52
A83 Perform operational checks of processors	50
G479 Isolate malfunctions to cables	49
A1 Analyze equipment outages or malfunction reports	48
A68 Perform operational checks of display equipment	48
D272 Isolate malfunctions to processors	47
B149 Perform PMIs on printers	46
D237 Isolate malfunctions to display equipment, such as CRTs	45
S954 Inventory equipment, tools, parts, or supplies	44
B135 Perform PMIs on keyboards	44
Q905 Maintain training records or files	43
H511 Connect or disconnect fiber optic cables to or from interface equipment	42
E411 Remove or replace nonelectrical hardware, such as screws, nuts, ejectors, or covers	42
S949 Evaluate serviceability of equipment, tools, parts, or supplies	42
N763 Retrieve CAMS listings or reports	41
S963 Store equipment, tools, parts, or supplies	40
A73 Perform operational checks of local area network (LAN) components, such as routers, servers, or hubs	39
A21 Bench check printers	39
D253 Isolate malfunctions to LAN components, such as routers, servers, or hubs	38
A74 Perform operational checks of LANs	38

TABLE 14

TASKS WHICH BEST DIFFERENTIATE BETWEEN
AD DAFSCs 2E231 AND 2E251 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS	DAFSC 2E231 (N=68)	DAFSC 2E251 (N=138)	DIFFERENCE
P879 Supervise military personnel	1	37	-36
P817 Conduct supervisory performance feedback sessions	1	37	-36
P821 Counsel subordinates concerning personal matters	1	35	-34
P825 Determine or establish work assignments or priorities	2	35	-33
P852 Evaluate personnel for compliance with performance standards	1	31	-30
P884 Write recommendations for awards or decorations	*	29	-29
P882 Write performance reports or supervisory appraisals	*	30	-29
Q903 Evaluate progress of trainees	4	33	-29
Q891 Conduct OJT	24	53	-29
Q905 Maintain training records or files	15	43	-28
P842 Establish performance standards for subordinates	1	28	-27
P815 Conduct self-inspections or self-assessments	2	30	-28
P867 Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	8	34	-26
P819 Conduct supervisory orientations for newly assigned personnel	1	26	-25

*Denotes less than 1 percent

TABLE 15

REPRESENTATIVE TASKS PERFORMED BY AD 2E251A PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=8)
J597 Isolate malfunctions to finger-on-glass (FOG) devices	100
H511 Connect or disconnect fiber optic cables to or from interface equipment	100
J615 Remove or replace FOG devices	100
N752 Access core automated maintenance system (CAMS) menus and data screens	100
D269 Isolate malfunctions to power supplies	100
J613 Remove or replace bus interface controllers	100
J591 Isolate malfunctions to bus interface controllers	100
J592 Isolate malfunctions to circuit switch functions (CSFs)	100
J596 Isolate malfunctions to exchange assemblies (EXAs)	100
J609 Perform operational checks of electrical optical converters	100
J611 Perform operational checks of RIUs	100
J608 Perform operational checks of CSFs	100
J612 Perform operational checks of RPPs/SEPPs	100
E376 Remove or replace display equipment, such as CRTs	100
J610 Perform operational checks of EXAs	100
Q891 Conduct OJT	100
D205 Discriminate between hardware and software failures	88
A54 Perform power-up or power-down procedures	88
E383 Remove or replace equipment grounds	88
O780 Erect camouflage nettings	88
O781 Erect tents	88
D307 Isolate malfunctions within display equipment, such as CRTs, to cards or subassemblies	88
O793 Participate in convoy exercises	88
E380 Remove or replace electronic circuit cards or printed circuit boards	88
O802 Prepare electronic computer or switching systems for operation at deployed locations	88
A80 Perform operational checks of power distribution systems	88
J593 Isolate malfunctions to communications and maintenance panels	88
J601 Isolate malfunctions within communications and maintenance panel subassemblies	88
N764 Review preventive maintenance schedules	88
O800 Perform predeployment inspections of mobile support equipment	88
O807 Set up or tear down shelters	88
B131 Perform PMIs on display equipment, such as CRTs	88

TABLE 16

REPRESENTATIVE TASKS PERFORMED BY AD 2E251B PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=59)
E420 Remove or replace power supplies	85
N752 Access core automated maintenance system (CAMS) menus and data screens	80
A68 Perform operational checks of display equipment	80
A54 Perform power-up or power-down procedures	80
D237 Isolate malfunctions to display equipment, such as CRTs	78
A82 Perform operational checks of printers	78
D307 Isolate malfunctions within display equipment, such as CRTs, to cards or subassemblies	76
Q891 Conduct OJT	75
D269 Isolate malfunctions to power supplies	75
A72 Perform operational checks of keyboards	75
K620 Isolate malfunctions to airborne warning and control system (AWACS) mission simulator (MS) or mission avionics (MA) data processing systems	73
A27 Connect or disconnect power, power panels, or equipment leads	73
A81 Perform operational checks of power supplies	73
A45 Perform data destruct procedures	71
K628 Isolate malfunctions within AWACS MS or MA data processing systems (DPSs)	68
K621 Isolate malfunctions to magnetic drum units	68
D205 Discriminate between hardware and software failures	66
D229 Isolate malfunctions to core memory assemblies	66
A63 Perform operational checks of core memory assemblies	66
K648 Perform preflight inspections of display equipment	64
A76 Perform operational checks of maintenance or operator panels or consoles	64
K661 Remove or replace magnetic drum units	64
E376 Remove or replace display equipment, such as CRTs	63
K618 Connect external cooling to aircraft	63
K619 Connect external power to aircraft	63
A78 Perform operational checks of multiplexers	63
E402 Remove or replace maintenance or operator panels or consoles	63
K636 Perform aircraft computer preflight inspections	61
N754 Analyze CAMS data	61
E375 Remove or replace display equipment subassemblies	61
K654 Perform preflight inspections on keyboards	61

TABLE 17

TASKS WHICH BEST DIFFERENTIATE BETWEEN
AD DAFSCs 2E231B AND 2E251B PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS	DAFSC 2E231B (N=77)	DAFSC 2E251B (N=59)	DIFF
D324 Isolate malfunctions within multiplexers to components	39	10	29
D323 Isolate malfunctions within multiplexers to cards or subassemblies	64	37	27
D332 Isolate malfunctions within processors to components	32	7	25
N768 Update personnel data files in CAMS	42	19	23
D300 Isolate malfunctions within core memory assemblies to components	40	20	20
K644 Perform PMIs on magnetic drum units	47	27	20
D327 Isolate malfunctions within power supplies to cards or subassemblies	42	22	20
K616 Adjust or align magnetic drum units	32	14	18
S962 Pick up or deliver equipment, tools, parts, or supplies	62	44	18
K649 Perform preflight inspections of hard-disk subsystems (HDSs)	75	58	17
Q903 Evaluate progress of trainees	6	44	-38
Q891 Conduct OJT	39	75	-36
P825 Determine or establish work assignments or priorities	4	34	-30
P817 Conduct supervisory performance feedback sessions	*	29	-29
P821 Counsel subordinates concerning personal matters	3	31	-28
A36 Dispatch crews to work projects	6	34	-28
Q899 Evaluate personnel to determine training needs	10	37	-27
Q886 Administer or score tests	3	29	-26
P884 Write recommendations for awards or decorations	*	25	-25
P879 Supervise military personnel	3	27	-24

*Denotes less than 1 percent

TABLE 18

REPRESENTATIVE TASKS PERFORMED BY AD 2E251C PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=69)
N752 Access core automated maintenance system (CAMS) menus and data screens	75
D205 Discriminate between hardware and software failures	68
A54 Perform power-up or power-down procedures	67
B121 Perform PMIs on blowers or cooling fans	64
F453 Apply corrosion preventive materials to equipment or supplies	64
F467 Remove corrosion from metal surfaces	62
E387 Remove or replace fuses	62
F460 Inspect electronic drawers for corrosion	61
F457 Inspect cabinets for corrosion	61
A82 Perform operational checks of printers	59
N767 Update maintenance data collection (MDC) data using CAMS	59
S949 Evaluate serviceability of equipment, tools, parts, or supplies	59
B149 Perform PMIs on printers	59
A40 Load or unload government vehicles for dispatch	58
C191 Adjust or align printers	57
E353 Remove or replace blowers or cooling fans	57
E423 Remove or replace printers	55
D271 Isolate malfunctions to printers	55
A21 Bench check printers	55
N764 Review preventive maintenance schedules	54
A1 Analyze equipment outages or malfunction reports	54
Q891 Conduct OJT	54
A27 Connect or disconnect power, power panels, or equipment leads	54
N763 Retrieve CAMS listings or reports	52
N765 Track ancillary training in CAMS	52
N768 Update personnel data files in CAMS	52
E411 Remove or replace nonelectrical hardware, such as screws, nuts, ejectors, or covers	52
N770 Verify CAMS products	51
S954 Inventory equipment, tools, parts, or supplies	49
N754 Analyze CAMS data	48
N769 Update workcenter training reports in CAMS	46
Q905 Maintain training records or files	45
A28 Coordinate dispatches with maintenance control	45
B124 Perform PMIs on cabinets, racks, or subfloors	45
F465 Inspect station grounds for corrosion	45

TABLE 19

TASKS WHICH BEST DIFFERENTIATE BETWEEN AD DAFSCs 2E231C AND 2E251C PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS	DAFSC 2E231C (N=61)	DAFSC 2E251C (N=69)	DIFFERENCE
E420 Remove or replace power supplies	90	57	34
A67 Perform operational checks of disc systems	62	33	29
B130 Perform PMIs on disc systems	66	39	26
A82 Perform operational checks of printers	85	59	26
E353 Remove or replace blowers or cooling fans	82	57	25
A81 Perform operational checks of power supplies	80	55	25
E349 Remove or replace batteries	62	38	25
L729 Remove or replace SFUs	62	38	25
B148 Perform PMIs on power supplies	52	29	23
<hr/>			
P818 Conduct safety inspections of equipment or facilities	7	41	-34
P821 Counsel subordinates concerning personal matters	3	38	-34
P879 Supervise military personnel	3	36	-33
Q905 Maintain training records or files	13	45	-32
Q891 Conduct OJT	23	54	-31
Q911 Schedule personnel for training	10	41	-31
Q903 Evaluate progress of trainees	8	39	-31
P817 Conduct supervisory performance feedback sessions	*	30	-30
P825 Determine or establish work assignments or priorities	5	33	-28
P815 Conduct self-inspections or self-assessments	8	35	-27

*Denotes less than 1 percent

TABLE 20

REPRESENTATIVE TASKS PERFORMED BY AD 2E271 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=332)
P879 Supervise military personnel	72
P817 Conduct supervisory performance feedback sessions	71
P867 Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	70
P821 Counsel subordinates concerning personal matters	70
P884 Write recommendations for awards or decorations	69
P825 Determine or establish work assignments or priorities	68
P814 Conduct general meetings, such as staff meetings, briefings, conferences, or workshops	65
P852 Evaluate personnel for compliance with performance standards	63
P811 Assign personnel to work areas or duty positions	62
P882 Write performance reports or supervisory appraisals	61
P819 Conduct supervisory orientations for newly assigned personnel	61
P863 Inspect personnel for compliance with military standards	60
P815 Conduct self-inspections or self-assessments	58
P842 Establish performance standards for subordinates	57
P864 Interpret policies, directives, or procedures for subordinates	56
Q905 Maintain training records or files	55
P831 Develop or establish work schedules	55
P875 Schedule personnel for temporary duty (TDY) assignments, leaves, or passes	54
P823 Determine or establish logistics requirements, such as personnel, equipment, tools, parts, supplies, or workspace	53
P830 Develop or establish work methods or procedures	53
P853 Evaluate personnel for promotion, demotion, reclassification, or special awards	53
P833 Direct training functions	51
N752 Access core automated maintenance system (CAMS) menus and data screens	51
P877 Schedule work assignments or priorities	51
P855 Evaluate work schedules	51
P812 Assign sponsors for newly assigned personnel	50
P818 Conduct safety inspections of equipment or facilities	49

TABLE 21

TASKS WHICH BEST DIFFERENTIATE BETWEEN AD DAFSCs 2E251 AND 2E271 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS	DAFSC 2E251 (N=660)	DAFSC 2E271 (N=332)	DIFFERENCE
A82 Perform operational checks of printers	64	35	29
A54 Perform power-up or power-down procedures	69	40	29
E420 Remove or replace power supplies	58	31	27
D205 Discriminate between hardware and software failures	72	47	25
A72 Perform operational checks of keyboards	59	33	25
D269 Isolate malfunctions to power supplies	55	30	25
E394 Remove or replace keyboards	56	31	25
D271 Isolate malfunctions to printers	58	33	25
A27 Connect or disconnect power, power panels, or equipment leads	55	31	24
A81 Perform operational checks of power supplies	55	31	24
P814 Conduct general meetings, such as staff meetings, briefings, conferences, or workshops	20	65	-44
P811 Assign personnel to work areas or duty positions	21	62	-41
P884 Write recommendations for awards or decorations	29	69	-40
P812 Assign sponsors for newly assigned personnel	12	50	-38
P875 Schedule personnel for temporary duty (TDY) assignments, leaves, or passes	15	54	-38
P881 Write job or position descriptions	12	47	-36
P821 Counsel subordinates concerning personal matters	35	70	-36
P867 Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	34	70	-36
P850 Evaluate logistics requirements, such as personnel, equipment, tools, parts, supplies, or workspace	14	49	-35
P823 Determine or establish logistics requirements, such as personnel, equipment, tools, parts, supplies, or workspace	17	53	-35

TABLE 22

REPRESENTATIVE TASKS PERFORMED BY AD 2E291 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=22)
P867 Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	77
P868 Plan briefings, conferences, or workshops	77
P835 Draft agenda for general meetings, such as staff meetings, briefings, conferences, or workshops	77
P874 Review drafts of policy directives, manuals, or instructions	68
P834 Draft budget requirements	68
P814 Conduct general meetings, such as staff meetings, briefings, conferences, or workshops	68
P825 Determine or establish work assignments or priorities	68
P864 Interpret policies, directives, or procedures for subordinates	64
P852 Evaluate personnel for compliance with performance standards	64
P821 Counsel subordinates concerning personal matters	64
P845 Evaluate budget requirements	64
P850 Evaluate logistics requirements, such as personnel, equipment, tools, parts, supplies, or workspace	59
P823 Determine or establish logistics requirements, such as personnel, equipment, tools, parts, supplies, or workspace	59
P879 Supervise military personnel	59
P841 Establish organizational policies, such as operating instructions (OIs) or standard operating procedures (SOPs)	59
P875 Schedule personnel for temporary duty (TDY) assignments, leaves, or passes	55
P863 Inspect personnel for compliance with military standards	55
P849 Evaluate job-related suggestions	55
P858 Evaluate maintenance or utilization of equipment, tools, parts, supplies, or workspace	55
P832 Direct administrative functions	55
P853 Evaluate personnel for promotion, demotion, reclassification, or special awards	50
P842 Establish performance standards for subordinates	50
P817 Conduct supervisory performance feedback sessions	50
P811 Assign personnel to work areas or duty positions	50

TABLE 23

TASKS WHICH BEST DIFFERENTIATE BETWEEN AD DAFSCs 2E271 AND 2E291 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS	DAFSC 2E271 (N=332)	DAFSC 2E291 (N=22)	DIFFERENCE
Q905 Maintain training records or files	55	5	51
Q903 Evaluate progress of trainees	46	9	37
Q891 Conduct OJT	42	9	33
D205 Discriminate between hardware and software failures	47	14	33
N752 Access core automated maintenance system (CAMS) menus and data screens	51	18	33
A54 Perform power-up or power-down procedures	40	9	31
N770 Verify CAMS products	40	9	31
Q899 Evaluate personnel to determine training needs	48	18	30
Q897 Develop training programs, plans, or procedures	30	*	30
N764 Review preventive maintenance schedules	38	9	29
<hr/>			
P868 Plan briefings, conferences, or workshops	37	77	-40
P835 Draft agenda for general meetings, such as staff meetings, briefings, conferences, or workshops	39	77	-38
P834 Draft budget requirements	36	68	-32
P845 Evaluate budget requirements	33	64	-31
P874 Review drafts of policy directives, manuals, or instructions	38	68	-30
P883 Write staff studies, surveys, or routine reports, other than training or inspection reports	23	50	-27
P841 Establish organizational policies, such as operating instructions (OIs) or standard operating procedures (SOPs)	35	59	-24
P820 Coordinate host-tenant or interservice agreements with appropriate agencies	22	45	-23
P861 Initiate personnel action requests	21	41	-20
R922 Initiate classified reports, messages, or documents	8	27	-20

*Denotes less than 1 percent

TABLE 24

REPRESENTATIVE TASKS PERFORMED BY ANG 2E251 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=183)
D205 Discriminate between hardware and software failures	78
A54 Perform power-up or power-down procedures	74
A82 Perform operational checks of printers	67
A27 Connect or disconnect power, power panels, or equipment leads	67
E420 Remove or replace power supplies	65
A72 Perform operational checks of keyboards	63
A81 Perform operational checks of power supplies	63
D269 Isolate malfunctions to power supplies	63
E394 Remove or replace keyboards	62
E387 Remove or replace fuses	58
D271 Isolate malfunctions to printers	57
E349 Remove or replace batteries	56
A20 Bench check power supplies	52
E423 Remove or replace printers	52
G486 Perform inspections of cables, cable troughs, or connectors, other than for corrosion	52
D251 Isolate malfunctions to keyboards	52
B149 Perform PMIs on printers	52
G479 Isolate malfunctions to cables	52
E376 Remove or replace display equipment, such as CRTs	51
A68 Perform operational checks of display equipment	50
B135 Perform PMIs on keyboards	50
O778 Don or doff chemical warfare personal protective clothing	49
A1 Analyze equipment outages or malfunction reports	48
A83 Perform operational checks of processors	48
E380 Remove or replace electronic circuit cards or printed circuit boards	47
E411 Remove or replace nonelectrical hardware, such as screws, nuts, ejectors, or covers	47
D237 Isolate malfunctions to display equipment, such as CRTs	47
A43 Pack or tag components or spare parts	47
A15 Bench check keyboards	45
M746 Load or operate programs	44
G489 Remove or replace cable runs	44
O802 Prepare electronic computer or switching systems for operation at deployed locations	43
O781 Erect tents	43
E406 Remove or replace mouse devices	42

TABLE 25

REPRESENTATIVE TASKS PERFORMED BY ANG 2E271 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=174)
D205 Discriminate between hardware and software failures	80
E420 Remove or replace power supplies	70
A54 Perform power-up or power-down procedures	68
A82 Perform operational checks of printers	68
O778 Don or doff chemical warfare personal protective clothing	66
A81 Perform operational checks of power supplies	66
E423 Remove or replace printers	65
A1 Analyze equipment outages or malfunction reports	64
A72 Perform operational checks of keyboards	64
D271 Isolate malfunctions to printers	64
E387 Remove or replace fuses	63
E394 Remove or replace keyboards	61
D269 Isolate malfunctions to power supplies	60
O781 Erect tents	58
Q891 Conduct OJT	57
E349 Remove or replace batteries	57
A27 Connect or disconnect power, power panels, or equipment leads	55
O780 Erect camouflage nettings	54
E411 Remove or replace nonelectrical hardware, such as screws, nuts, ejectors, or covers	53
E380 Remove or replace electronic circuit cards or printed circuit boards	53
A68 Perform operational checks of display equipment	53
Q905 Maintain training records or files	52
N752 Access core automated maintenance system (CAMS) menus and data screens	51
E376 Remove or replace display equipment, such as CRTs	51
S949 Evaluate serviceability of equipment, tools, parts, or supplies	51
O784 Inspect mobility bags or kits	51
A36 Dispatch crews to work projects	50
O798 Perform pallet buildup activities	49
O802 Prepare electronic computer or switching systems for operation at deployed locations	49
O792 Palletize mobility or contingency equipment for shipment or movement	48

TABLE 26

REPRESENTATIVE TASKS PERFORMED BY ANG 2E291 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=6)
P879 Supervise military personnel	100
P855 Evaluate work schedules	100
P831 Develop or establish work schedules	100
P861 Initiate personnel action requests	100
P867 Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	83
P825 Determine or establish work assignments or priorities	83
P821 Counsel subordinates concerning personal matters	83
Q903 Evaluate progress of trainees	83
P853 Evaluate personnel for promotion, demotion, reclassification, or special awards	83
P811 Assign personnel to work areas or duty positions	83
P852 Evaluate personnel for compliance with performance standards	83
P842 Establish performance standards for subordinates	83
Q893 Determine training requirements	83
P814 Conduct general meetings, such as staff meetings, briefings, conferences, or workshops	83
P819 Conduct supervisory orientations for newly assigned personnel	83
P875 Schedule personnel for temporary duty (TDY) assignments, leaves, or passes	83
P884 Write recommendations for awards or decorations	83
P833 Direct training functions	83
P882 Write performance reports or supervisory appraisals	83
P846 Evaluate inspection report findings or inspection procedures	83
Q909 Procure training aids, space, or equipment	83
Q887 Assign formal course instructors or on-the-job training (OJT) trainers or certifiers	83
P843 Establish procedures for accountability of equipment, tools, parts, or supplies	83
P881 Write job or position descriptions	83
P818 Conduct safety inspections of equipment or facilities	67
P817 Conduct supervisory performance feedback sessions	67
Q911 Schedule personnel for training	67

TABLE 27

REPRESENTATIVE TASKS PERFORMED BY AFRC 2E251 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=36)
O778 Don or doff chemical warfare personal protective clothing	61
A82 Perform operational checks of printers	61
D205 Discriminate between hardware and software failures	58
A72 Perform operational checks of keyboards	56
E394 Remove or replace keyboards	50
A81 Perform operational checks of power supplies	47
A54 Perform power-up or power-down procedures	44
G502 Terminate cables with punch-on devices	42
D271 Isolate malfunctions to printers	42
A15 Bench check keyboards	42
E423 Remove or replace printers	42
E406 Remove or replace mouse devices	42
O790 Operate portable radios, such as field radios, during contingency exercises or operations	39
D237 Isolate malfunctions to display equipment, such as CRTs	39
O781 Erect tents	39
O782 Identify chemical warfare agents	36
O798 Perform pallet buildup activities	36
E411 Remove or replace nonelectrical hardware, such as screws, nuts, ejectors, or covers	33
A14 Bench check display equipment, such as cathode ray tubes (CRTs)	33
D272 Isolate malfunctions to processors	33
G498 Remove or replace twisted-pair cables	31
S954 Inventory equipment, tools, parts, or supplies	31
S962 Pick up or deliver equipment, tools, parts, or supplies	31
A21 Bench check printers	31
A83 Perform operational checks of processors	31
O792 Palletize mobility or contingency equipment for shipment or movement	31
A43 Pack or tag components or spare parts	28
O780 Erect camouflage nettings	28
O788 Operate chemical warfare personal protective equipment during contingency exercises or operations	28
G486 Perform inspections of cables, cable troughs, or connectors, other than for corrosion	25
A2 Assemble or disassemble conference systems, such as public address (PA) systems or video-conferencing systems	25
G483 Mark, cut, strip, or butt cables	25

TABLE 28

REPRESENTATIVE TASKS PERFORMED BY AFRC 2E271 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=24)
O778 Don or doff chemical warfare personal protective clothing	79
O781 Erect tents	71
P819 Conduct supervisory orientations for newly assigned personnel	63
P815 Conduct self-inspections or self-assessments	63
O789 Operate field generators during contingency exercises or operations	63
P825 Determine or establish work assignments or priorities	58
Q891 Conduct OJT	58
O784 Inspect mobility bags or kits	58
O798 Perform pallet buildup activities	58
E423 Remove or replace printers	58
O782 Identify chemical warfare agents	58
A106 Setup or tear down antennas	58
Q910 Schedule training	58
D205 Discriminate between hardware and software failures	54
A82 Perform operational checks of printers	54
P814 Conduct general meetings, such as staff meetings, briefings, conferences, or workshops	54
Q905 Maintain training records or files	50
D271 Isolate malfunctions to printers	50
O792 Palletize mobility or contingency equipment for shipment or movement	50
P867 Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	50
O795 Perform chemical warfare agent decontamination procedures	50
O802 Prepare electronic computer or switching systems for operation at deployed locations	50
Q908 Prepare job qualification standards (JQSs)	46
O783 Identify equipment or personnel requirements for mobility exercises or deployments	46
A54 Perform power-up or power-down procedures	46
O790 Operate portable radios, such as field radios, during contingency exercises or operations	46
R939 Review TO changes	42
G494 Remove or replace field wires	42

TABLE 29

TASKS WHICH BEST DIFFERENTIATE BETWEEN AD 2E251 AND ANG 2E251 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS	ACTIVE 2E251 (N=660)	ANG 2E251 (N=183)	DIFFERENCE
P817 Conduct supervisory performance feedback sessions	37	4	32
P821 Counsel subordinates concerning personal matters	35	5	30
P879 Supervise military personnel	37	8	29
Q905 Maintain training records or files	43	14	29
Q891 Conduct OJT	53	25	27
P882 Write performance reports or supervisory appraisals	30	3	27
P852 Evaluate personnel for compliance with performance standards	31	4	27
N765 Track ancillary training in CAMS	36	10	26
P884 Write recommendations for awards or decorations	29	3	26
P825 Determine or establish work assignments or priorities	35	9	26
<hr/>			
A3 Assemble or disassemble electrical switches	20	40	-21
G494 Remove or replace field wires	15	36	-21
G501 Splice wires	18	39	-20
I572 Perform ring-back operational checks	8	27	-19
I573 Perform operational checks of handsets	18	38	-19
G502 Terminate cables with punch-on devices	17	34	-18
I574 Perform operational checks of headsets	16	34	-18
I576 Perform operational checks of singleline telephones	11	30	-18
I589 Remove or replace telephone cords	10	28	-17
O781 Erect tents	25	43	-17

TABLE 30

TASKS WHICH BEST DIFFERENTIATE BETWEEN AD 2E251 AND AFRC 2E251 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS	ACTIVE 2E251 (N=660)	AFRC 2E251 (N=36)	DIFFERENCE
N752 Access core automated maintenance system (CAMS) menus and data screens	58	17	41
E353 Remove or replace blowers or cooling fans	46	6	41
Q891 Conduct OJT	53	14	39
B135 Perform PMIs on keyboards	44	6	38
B149 Perform PMIs on printers	46	8	38
F457 Inspect cabinets for corrosion	39	3	36
B131 Perform PMIs on display equipment, such as CRTs	39	3	36
N754 Analyze CAMS data	38	3	35
H511 Connect or disconnect fiber optic cables to or from interface equipment	42	8	34
P817 Conduct supervisory performance feedback sessions	37	3	34
<hr/>			
O778 Don or doff chemical warfare personal protective clothing	33	61	-28
G502 Terminate cables with punch-on devices	17	42	-25
O790 Operate portable radios, such as field radios, during contingency exercises or operations	15	39	-24
A106 Setup or tear down antennas	12	33	-21
O789 Operate field generators during contingency exercises or operations	12	33	-21

TABLE 31

TASKS WHICH BEST DIFFERENTIATE BETWEEN AD 2E271 AND ANG 2E271 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS	ACTIVE 2E271 (N=332)	ANG 2E271 (N=174)	DIFFERENCE
P817 Conduct supervisory performance feedback sessions	71	25	46
P882 Write performance reports or supervisory appraisals	61	18	43
P884 Write recommendations for awards or decorations	69	29	39
P814 Conduct general meetings, such as staff meetings, briefings, conferences, or workshops	65	26	38
P881 Write job or position descriptions	47	10	37
P875 Schedule personnel for temporary duty (TDY) assignments, leaves, or passes	54	18	36
P821 Counsel subordinates concerning personal matters	70	37	34
P842 Establish performance standards for subordinates	57	24	33
P852 Evaluate personnel for compliance with performance standards	63	32	31
P812 Assign sponsors for newly assigned personnel	50	21	29
<hr style="border-top: 1px dashed black;"/>			
O778 Don or doff chemical warfare personal protective clothing	21	66	-45
O781 Erect tents	16	58	-42
E420 Remove or replace power supplies	31	70	-39
O788 Operate chemical warfare personal protective equipment during contingency exercises or operations	13	51	-38
O780 Erect camouflage nettings	16	54	-38
O795 Perform chemical warfare agent decontamination procedures	11	48	-37
O782 Identify chemical warfare agents	14	49	-36
O790 Operate portable radios, such as field radios, during contingency exercises or operations	12	48	-36
E387 Remove or replace fuses	27	63	-36
E349 Remove or replace batteries	22	57	-35

TABLE 32

TASKS WHICH BEST DIFFERENTIATE BETWEEN AD 2E271 AND AFRC 2E271 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS	ACTIVE 2E271 (N=332)	AFRC 2E271 (N=24)	DIFFERENCE
P884	69	21	48
P882	61	17	44
P875	54	13	41
P881	47	8	39
P850	49	13	36
P864	56	21	35
P879	72	38	34
P852	63	29	34
P817	71	38	34
P812	50	17	33
<hr/>			
O778	21	79	-58
O781	16	71	-55
O789	10	63	-53
A106	9	58	-49
O782	14	58	-44
O798	17	58	-41
O795	11	50	-39
O784	20	58	-38
O801	7	42	-35
O805	4	38	-34

TABLE 33

TASKS WHICH BEST DIFFERENTIATE BETWEEN AD 2E291 AND ANG 2E291 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS	ACTIVE 2E291 (N=22)	ANG 2E291 (N=6)	DIFFERENCE
P835 Draft agenda for general meetings, such as staff meetings, briefings, conferences, or workshops	77	33	44
P868 Plan briefings, conferences, or workshops	77	33	44
R914 Annotate security forms for facilities or security containers	36	*	36
P874 Review drafts of policy directives, manuals, or instructions	68	33	35
P834 Draft budget requirements	68	33	35
R915 Compile data for records, reports, logs, or trend analyses	32	*	32
R918 Destroy classified materials	32	*	32
P845 Evaluate budget requirements	64	33	30
R928 Maintain administrative files	27	*	27
O774 Develop personnel recall or accounting procedures	27	*	27
<hr/>			
Q887 Assign formal course instructors or on-the-job training (OJT) trainers or certifiers	5	83	-79
Q903 Evaluate progress of trainees	9	83	-74
Q909 Procure training aids, space, or equipment	9	83	-74
P855 Evaluate work schedules	27	100	-73
A36 Dispatch crews to work projects	5	67	-62
Q893 Determine training requirements	23	83	-61
P861 Initiate personnel action requests	41	100	-59
P843 Establish procedures for accountability of equipment, tools, parts, or supplies	27	83	-56
P831 Develop or establish work schedules	50	100	-50
Q910 Schedule training	18	67	-48

*Denotes less than 1 percent

TRAINING ANALYSIS

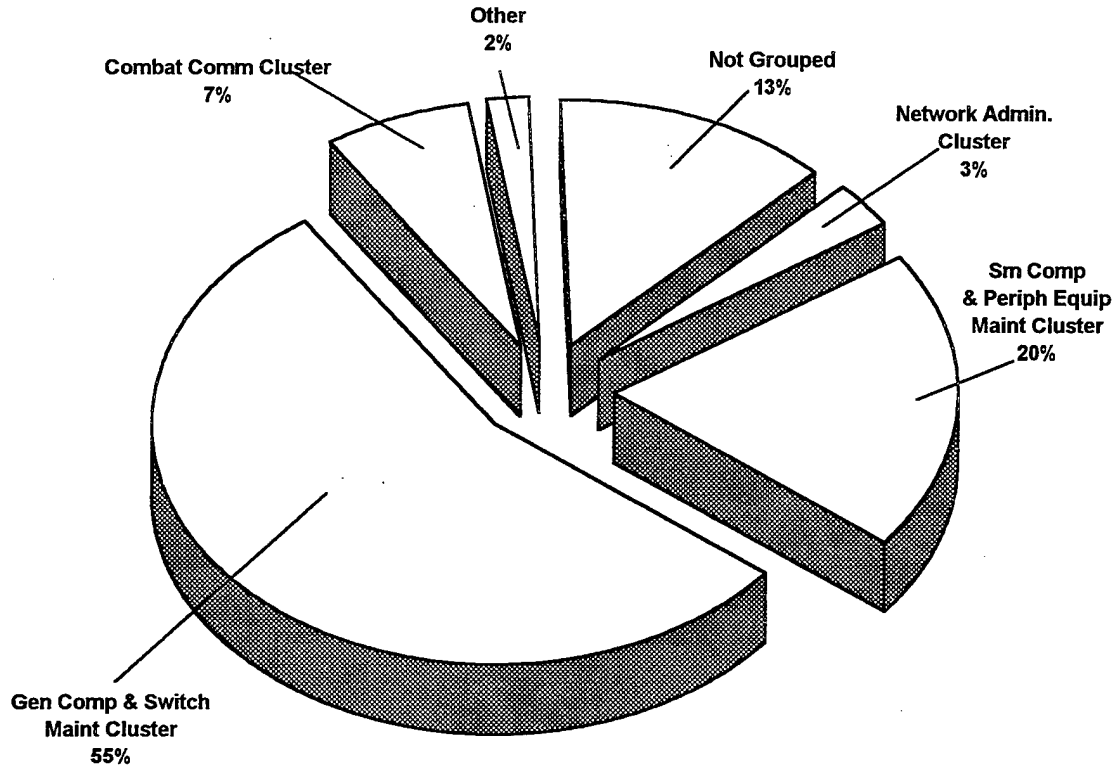
Occupational survey data are one of many sources of information which can be used to assist in the development of a training program relevant to the needs of personnel in their first enlistment (1-48 months TAFMS). Factors which may be used in evaluating training include the overall description of the work being performed by first-enlistment personnel, their overall distribution across career ladder jobs, the tasks performed by first-enlistment members, and TD ratings (previously explained in the **SURVEY METHODOLOGY** section).

First-Enlistment Personnel

In this study, there are 467 AD members in their first enlistment representing 24 percent of the total survey sample. Figure 2 reflects the distribution of first-enlistment personnel across specialty jobs. Over half of the first-enlistment personnel are located in the General Computer and Switching Maintenance Cluster, the core job of the career field. Most of their duty time is spent on technical activities. Table 34 displays the relative percent of time spent on duties by first-enlistment personnel and shows that first-enlistment personnel spend nearly half their time performing the technical tasks of Duties A, D and E.

Table 35 lists representative tasks performed by first-enlistment personnel. Recurring themes in task performance include: operational checks, PMIs, and isolating malfunctions. Table 36 reflects computer operating systems used or operated by first-enlistment personnel; Windows 95 and MS-DOS were the two primary systems maintained. Table 37 lists computer system peripherals maintained by first-enlistment personnel. Table 38 provides types of test equipment used by first-enlistment personnel, with Table 39 showing typical AF and DD forms used by first-enlistment personnel.

**DISTRIBUTION OF 2E2X1 FIRST-ENLISTMENT PERSONNEL
ACROSS SPECIALTY JOBS
(N = 467)**



Other Includes:
Job Control - 1%
Sup. Cluster, QA, Instructor - less than 1%

FIGURE 2

TABLE 34

RELATIVE PERCENT TIME SPENT ON DUTIES BY
FIRST-ENLISTMENT PERSONNEL
(N=467)

DUTIES	PERCENT TIME SPENT
A PERFORMING GENERAL ELECTRONIC COMPUTER AND SWITCHING SYSTEMS MAINTENANCE	21
B PERFORMING GENERAL PREVENTIVE MAINTENANCE INSPECTIONS (PMIs) ON EQUIPMENT OR COMPONENTS	8
C PERFORMING GENERAL ALIGNMENTS OR ADJUSTMENTS	3
D PERFORMING GENERAL TROUBLESHOOTING PROCEDURES	15
E REMOVING OR REPLACING GENERAL EQUIPMENT OR COMPONENTS	13
F PERFORMING GENERAL CORROSION CONTROL ACTIVITIES	3
G MAINTAINING CABLES, WIRING, OR ASSOCIATED EQUIPMENT	5
H MAINTAINING FIBER OPTIC CABLE SYSTEMS	2
I MAINTAINING HANDSETS, HEADSETS, OR TELEPHONES	2
J PERFORMING MODULAR CONTROL EQUIPMENT (MCE) SPECIFIC MAINTENANCE	1
K PERFORMING AIRBORNE COMPUTER SPECIFIC MAINTENANCE	4
L PERFORMING STRATEGIC COMMUNICATIONS (STRATCOM) SPECIFIC MAINTENANCE	2
M PERFORMING OPERATOR ACTIVITIES	2
N PERFORMING MAINTENANCE MANAGEMENT ACTIVITIES	6
O PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES	5
P PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	1
Q PERFORMING TRAINING ACTIVITIES	2
R PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	2
S PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	4

TABLE 35

REPRESENTATIVE TASKS PERFORMED BY AD 2E2X1
FIRST-ENLISTMENT PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=467)
A54 Perform power-up or power-down procedures	79
E420 Remove or replace power supplies	72
D205 Discriminate between hardware and software failures	71
A81 Perform operational checks of power supplies	71
A82 Perform operational checks of printers	70
N752 Access core automated maintenance system (CAMS) menus and data screens	69
A72 Perform operational checks of keyboards	67
D269 Isolate malfunctions to power supplies	66
A27 Connect or disconnect power, power panels, or equipment leads	65
E394 Remove or replace keyboards	60
E423 Remove or replace printers	59
D271 Isolate malfunctions to printers	58
B149 Perform PMIs on printers	57
D251 Isolate malfunctions to keyboards	57
B135 Perform PMIs on keyboards	55
A83 Perform operational checks of processors	55
E353 Remove or replace blowers or cooling fans	54
A68 Perform operational checks of display equipment	53
E376 Remove or replace display equipment, such as CRTs	51
A43 Pack or tag components or spare parts	51
D237 Isolate malfunctions to display equipment, such as CRTs	51
G479 Isolate malfunctions to cables	51
B131 Perform PMIs on display equipment, such as CRTs	50
F458 Inspect cables for corrosion	49
E387 Remove or replace fuses	49
E349 Remove or replace batteries	48
F457 Inspect cabinets for corrosion	47
N763 Retrieve CAMS listings or reports	46
A1 Analyze equipment outages or malfunction reports	45
N754 Analyze CAMS data	45
B148 Perform PMIs on power supplies	45

TABLE 36

COMPUTER OPERATING SYSTEMS USED OR OPERATED BY 20 PERCENT OR MORE
AD FIRST-ENLISTMENT AFSC 2E2X1 PERSONNEL

<u>COMPUTER SYSTEM</u>	<u>1ST ENL (N=467)</u>
WINDOWS 95	78
MS-DOS	50
UNIX	29
Novell	23
NT	19

TABLE 37

COMPUTER SYSTEM PERIPHERALS MAINTAINED BY 20 PERCENT OR MORE
AD FIRST-ENLISTMENT AFSC 2E2X1 PERSONNEL

COMPUTER SYSTEM PERIPHERAL	1ST ENL (N=467)
Keyboards	71
Monitors	64
Printers, Thermal	46
Mouse Devices	42
Magnetic Tape Units	37
Controllers	36
Tape Drives	36
CD-ROMs	35
Video Display Units (VDUs)	34
Printers, Dot Matrix	32
Digital Display Indicators	31
Printers, Impact	31
Printers, Laser Jet	31
Small Computer System Interfaces	31
Printers, Line	30
Ethernet Transceivers	24
Internet Adapter Units	24
Network Interfaces	24
Printers, Inkjet	22
Teletypewriters	20

TABLE 38

TEST EQUIPMENT USED BY 20 PERCENT OR MORE AFSC 2E2X1
FIRST-ENLISTMENT PERSONNEL

<u>EQUIPMENT</u>	<u>1ST ENL (N=467)</u>
Multimeters	82
Oscilloscopes	72
Voltmeters, Digital	57
Torque Wrenches	47
Breakout Boxes	34
Loop Back Plugs	34
Frequency Counters	28
Cable Testers	27
Laptop Computers	27
Power Supply Test Sets	20

TABLE 39

FORMS USED BY 20 PERCENT OR MORE AFSC 2E2X1 FIRST-ENLISTMENT
PERSONNEL

FORM		1ST ENL (N=467)
DD 1574	Serviceable Tag- Materiel	61
DD 1577-2	Unserviceable (Reparable) Tag Materiel	58
AFTO 22	Technical Order Improvement Report and Reply	57
AFTO 350	Reparable Item Processing Tag	57
AF 2005	Issue/Turn-In Request	54
DD 1577	Unserviceable (Condemned) Tag Materiel	53
AFTO 349	Maintenance Data Collection Record	45
AF 55	Employee Safety and Health Record	43
AF 1297	Temporary Issue Receipt	43
DD 1577-1	Unserviceable (Condemned) Label Materiel	41
AF 1492	Warning Tag	35
AF 457	USAF Hazard Report	29
AF 9	Request for Purchase	27
AF 2413	Supply Control Log	24
AF 1800	Operator's Inspection Guide-Trouble Report	23
AFTO 108	TMDE Certification	22
DD 1348	DoD Single Line Item Requisition System Document	22
SF 702	Security Container Check Sheet	20

Task Difficulty (TD) Data

Task Difficulty data are secondary factors that can assist technical school personnel in deciding which tasks should be emphasized in entry-level training. These ratings, based on the judgments of senior career ladder NCOs working at operational units in the field, are collected to provide training personnel with a measure of the difficulty of the JI tasks (see selected highly-rated tasks presented in Table 40). When combined with data on the percentages of first-enlistment personnel performing tasks, comparisons can be made to determine if training adjustments are necessary. For example, tasks receiving high TD ratings, accompanied by moderate to high percentages performing, may warrant resident training. Those tasks receiving high TD ratings, but low percentages performing, may be more appropriately planned for OJT programs within the career ladder. Low TD ratings may highlight tasks best omitted from training for first-enlistment personnel, but this decision must be weighed against percentages of personnel performing the tasks, command concerns, and the criticality of the tasks.

To assist technical school personnel, AFOMS has developed a computer program that incorporates these secondary factors and the percentage of first-enlistment personnel performing each task to produce an Automated Training Indicator (ATI) for each task. These indicators correspond to training decisions listed and defined in the Training Decision Logic Table found in Attachment 2, AETCI 36-2601, and allows course personnel to quickly focus their attention on those tasks which are most likely to qualify for initial resident course consideration. Due to low interrater reliability ratings on the TE booklets received for this study, no TE ratings will be discussed, and consequently, no ATI can be compiled.

Table 40 shows TD raters reported isolating malfunctions in various types of equipment as being the most difficult task to learn. Some examples of these equipment items are: processors, components, magnetic tape units, analog modems, and power supplies.

Various lists of tasks, accompanied by TD ratings, are contained in the Training Extract package and should be reviewed in detail by training school personnel. (For a more detailed explanation of TD ratings, see Task Factor Administration in the **SURVEY METHODOLOGY** section of this report.)

TABLE 40

TASKS RATED HIGHEST IN TASK DIFFICULTY

TASKS	TASK DIFF	PERCENT MEMBERS PERFORMING											
		3-SKL LVL (N=207)	3-LVL B-SHRED (N=77)	3-LVL C-SHRED (N=61)	5-SKL LVL (N=660)	5-LVL A-SHRED (N=8)	5-LVL B-SHRED (N=59)	5-LVL C-SHRED (N=69)	7-SKL LVL (N=332)				
M751	7.63	0	0	0	3	0	0	1	4				
D332	7.54	12	32	25	11	13	7	22	6				
D318	7.45	13	14	7	9	0	7	0	5				
D289	7.33	3	0	15	4	0	0	16	1				
D328	7.33	14	27	46	14	13	12	35	9				
D293	7.26	1	40	3	1	0	25	0	1				
D308	7.26	22	31	33	15	38	36	29	11				
D324	7.21	5	39	5	5	0	10	0	3				
D300	7.19	1	40	3	2	0	20	0	2				
D337	7.18	4	12	7	3	0	2	0	2				
D306	7.17	6	12	30	7	0	8	20	4				
D207	7.17	21	26	26	17	25	29	25	8				
D314	7.10	21	0	7	26	13	0	7	18				
D295	7.09	9	40	13	9	13	29	7	8				
A102	7.08	13	5	30	15	0	24	22	7				
D297	7.05	3	0	5	2	0	2	0	2				
D326	7.02	2	0	2	1	0	0	0	2				
D304	7.00	4	0	15	3	0	2	7	2				

NOTE: Average TD Rating is 5.00

Course Training Standard (CTS)

A comprehensive review of CTSs 2E2X1, 2E2X1A, 2E2X1B, and 2E2X1C, dated May 1997, compared CTS items to survey data (based on the assistance of SMEs in matching JI tasks to CTS elements). CTS elements containing general knowledge information, mandatory entries, subject-matter-knowledge-only requirements, or basic supervisory responsibilities were not examined. Task knowledge and performance elements of the CTS were compared against the standard set forth in AETCI 36-2601 and AFI 36-2623 (i.e., include tasks performed or knowledge required by 30 percent or more of the personnel in a skill level (criterion group) of the AFS).

Overall, all the CTSs are very well supported. In fact, both the 2E2X1 and 2E2X1B CTSs contained no unsupported elements. Table 41 shows three elements of CTS 2E2X1A which were unsupported. These dealt with isolating malfunctions to the DMU and VCAU, as well as removing/replacing VCAU LRUs. CTS 2E2X1C had only one element unsupported. This element dealt with removing/replacing a LRU within SACCS CTE.

Tasks not referenced to any element of the CTS are listed at the end of the CTS computer listing. These tasks were reviewed to determine if there were any tasks concentrated around any particular function or job. Normally, those technical tasks performed by 20 percent or more respondents of the CTS target groups, but which were not referenced to any CTS element, would be displayed in subsequent tables. However, given the four different CTSs reviewed, a task not referenced in one CTS may very well be referenced in one of the three remaining CTSs. For this reason, training personnel should examine the Training Extract and make judgments based on those tasks not referenced in any of the four CTSs. Training personnel and SMEs should review these unreferenced tasks to determine if inclusion in a particular CTS is justified.

TABLE 41

CTS 2E2X1A ITEMS NOT SUPPORTED BY SURVEY DATA
(LESS THAN 20 PERCENT MEMBERS PERFORMING)

		<u>TSK</u> <u>DIFF</u>	<u>5-LVL</u> <u>A-SHRED</u>
6.6	Isolate malfunctions to DMU		
D305	Isolate malfunctions within disc systems to cards or subassemblies	6.43	13
D236	Isolate malfunctions to disc systems	5.90	0
15.2	Isolate malfunctions to the VCAU		
D287	Isolate malfunctions to voice-activated communication	6.00	13
15.4	Remove or replace VCAU LRUs		
E449	Remove or replace voice-activated communication sets	4.20	0

NOTE: Average TD Rating is 5.00

Plan of Instruction (POI)

Technical school SMEs matched JI tasks to POIs E3ABR2E231, dated August 1997, E3ABR2E231A, dated August 1997, E3ABR2E231B, dated May 1997, and E3ABR2E231C, dated August 1997. Objectives were evaluated in a method similar to the CTS analysis, with an examination of percent members performing and TD ratings.

Unfortunately, an insufficient representation of A-shred 2E2X1 personnel precluded analysis of the A-shred POI; however, the remaining three POIs showed very high support. In fact, the slick POI contained no unsupported objectives, and the B-shred POI contained only one unsupported area, "performing store/display operations with the appropriate mode codes, using an approved checklist." The C-shred POI contained a total of four unsupported objectives which are highlighted in Table 42.

Many technical tasks, performed by over 30 percent of applicable personnel, were not matched to a given POI objective. Normally, examples of these tasks would be provided in subsequent tables. However, given the shredded nature of the POIs, this approach was not taken. A task showing up as not referenced in the B-shred POI would most likely show up as being supported in either the C-shred or slick POI.

TABLE 42

POI E3ABR2E231C ITEMS NOT SUPPORTED BY SURVEY DATA
(LESS THAN 30 PERCENT MEMBERS PERFORMING)

		<u>TSK DIFF</u>	<u>3-LVL B-SHRED</u>
3.7.2.b	Perform operational checkout of the VHF		
L714	Perform operational checks of very high frequency (VHF) radio interface circuits	5.30	18
3.7.3.a	Perform an operational check of the SACCS/CTE System		
L704	Perform operational checks of CTE	5.36	11
3.7.3.b	Perform an operational check of EWO-2		
L704	Perform operational checks of CTE	5.36	11
3.8.4.b	Remove an replace faulty LRU within SACCS/CTE		
L721	Remove or replace CTE	4.76	10

NOTE: Average TD Rating is 5.00

JOB SATISFACTION ANALYSIS

An examination of the job satisfaction indicators of various groups can give career ladder managers a better understanding of some of the factors which may affect the job performance of airmen in the career ladder. Attitude questions covering job interest, perceived utilization of talents and training, sense of accomplishment from work, and reenlistment intentions were included in the survey booklet to provide indications of job satisfaction.

Table 43 presents job satisfaction data for AFSC 2E2X1 TAFMS groups, together with TAFMS data for a comparative sample of Mission Equipment Management career ladders surveyed in 1997. All AFSC 2E2X1 TAFMS groups had lower ratings in every area of job satisfaction surveyed compared to the comparative sample. Perception of utilization of training showed the most significant difference. Satisfaction of current AFSC 2E2X1 personnel increases somewhat as experience increases. Reenlistment intentions for current first- and second-enlistment personnel are very low.

An indication of how job satisfaction perceptions have changed over time is provided in Table 44, where TAFMS data for the current survey respondents are presented, along with data from the last OSRs. Previous AFSC 362X3 first- and second-enlistment personnel showed a great increase in expressed job interest after the merger into AFSC 2E2X1. AFSC 362X3 first-enlistment personnel also showed improvements in perceived utilization of talents, and accomplishment gained from their work since the merger. However, post-merger reenlistment intentions across all AFSC 362X3 TAFMS groups have dropped significantly.

The satisfaction ratings for current AFSC 2E2X1 first-enlistment personnel have dropped in every area measured compared to the previous AFSC 305X4 survey. Current reenlistment intentions have dropped from previous AFSC 305X4 results in all TAFMS groups. All other satisfaction ratings between current results and previous AFSC 305X4 results have remained unchanged.

In Table 45, a review of the job satisfaction ratings for the specialty jobs and clusters identified in this survey reveals very low satisfaction ratings for the perceived use of training among the Headquarters Staff NCOs, Job Controllers and Network Administrators. Overall, members of the Network Administrations Cluster appear most satisfied with their job, but feel they do not get sufficient training, and tend not to reenlist. Job Controllers were the least satisfied of all jobs/clusters identified. All other jobs/clusters seem generally satisfied with their positions.

TABLE 43

COMPARISON OF JOB SATISFACTION INDICATORS BY TAFMS GROUPS
(PERCENT MEMBERS RESPONDING)

	1-48 MOS TAFMS		49-96 MOS TAFMS		97+ MOS TAFMS	
	1998 2E2X1 (N=467)	COMP SAMPLE* (N=3883)	1998 2E2X1 (N=244)	COMP SAMPLE* (N=2651)	1998 2E2X1 (N=785)	COMP SAMPLE* (N=6033)
<u>EXPRESSED JOB INTEREST:</u>						
INTERESTING	58	65	60	65	70	74
SO-SO	20	19	20	20	15	17
DULL	21	18	20	15	14	9
<u>PERCEIVED UTILIZATION OF TALENTS:</u>						
FAIRLY WELL TO PERFECTLY	70	72	73	75	77	83
LITTLE OR NOT AT ALL	30	28	27	25	23	17
<u>PERCEIVED UTILIZATION OF TRAINING:</u>						
FAIRLY WELL TO PERFECTLY	67	85	62	81	66	80
LITTLE OR NOT AT ALL	32	15	38	19	34	20
<u>SENSE OF ACCOMPLISHMENT GAINED FROM WORK:</u>						
SATISFIED	56	68	58	66	65	72
NEUTRAL	18	15	11	15	10	11
DISSATISFIED	26	17	31	19	24	17
<u>REENLISTMENT INTENTIONS:</u>						
YES, OR PROBABLY YES	43	57	47	66	66	71
NO, OR PROBABLY NO	57	43	52	34	12	8
PLAN TO RETIRE	0	0	0	0	21	21

EXPRESSED JOB INTEREST:

INTERESTING
SO-SO
DULL

PERCEIVED UTILIZATION OF TALENTS:

FAIRLY WELL TO PERFECTLY
LITTLE OR NOT AT ALL

PERCEIVED UTILIZATION OF TRAINING:

FAIRLY WELL TO PERFECTLY
LITTLE OR NOT AT ALL

SENSE OF ACCOMPLISHMENT GAINED FROM WORK:

SATISFIED
NEUTRAL
DISSATISFIED

REENLISTMENT INTENTIONS:

YES, OR PROBABLY YES
NO, OR PROBABLY NO
PLAN TO RETIRE

* Comparative sample of Mission Equipment Management career ladders surveyed in 1997 include AFSCs: 2A3X2A/B/C, 2A5X3A/B/C, 2A6X3, 2A6X5, 2A6X6, 2A7X1, 2A7X3, 2E1X1, 2E8X1, 2M0X2, 2W0X1, and 2W2X1

TABLE 44

COMPARISON OF CURRENT SURVEY AND PREVIOUS SURVEY BY TAFMS GROUPS
(PERCENT MEMBERS RESPONDING)

	1-48 MOS TAFMS			49-96 MOS TAFMS			97+ MOS TAFMS		
	1998 2E2X1 (N=467)	1993 305X4 (N=490)	1990 362X3 (N=34)	1998 2E2X1 (N=244)	1993 305X4 (N=351)	1990 362X3 (N=14)	1998 2E2X1 (N=785)	1993 305X4 (N=960)	1990 362X3 (N=35)
<u>EXPRESSED JOB INTEREST:</u>									
INTERESTING	58	69	44	60	64	36	70	69	69
SO-SO	20	19	21	20	18	64	15	16	26
DULL	21	12	35	20	17	0	14	14	6
<u>PERCEIVED UTILIZATION OF TALENTS:</u>									
FAIRLY WELL TO PERFECTLY	70	80	50	73	70	78	77	74	91
LITTLE OR NOT AT ALL	30	20	50	27	30	21	23	26	9
<u>PERCEIVED UTILIZATION OF TRAINING:</u>									
FAIRLY WELL TO PERFECTLY	67	73	71	62	61	71	66	64	86
LITTLE OR NOT AT ALL	32	27	29	38	39	29	34	36	14
<u>SENSE OF ACCOMPLISHMENT GAINED FROM WORK:</u>									
SATISFIED	56	69	44	58	58	50	65	63	60
NEUTRAL	18	13	21	11	14	7	10	12	20
DISSATISFIED	26	18	35	31	28	43	24	25	20
<u>REENLISTMENT INTENTIONS:</u>									
YES, OR PROBABLY YES	43	64	65	47	66	64	66	70	80
NO, OR PROBABLY NO	57	36	35	52	33	36	12	10	9
PLAN TO RETIRE	0	0	0	0	0	0	21	19	11

EXPRESSED JOB INTEREST:
INTERESTING
SO-SO
DULL

PERCEIVED UTILIZATION OF TALENTS:
FAIRLY WELL TO PERFECTLY
LITTLE OR NOT AT ALL

PERCEIVED UTILIZATION OF TRAINING:
FAIRLY WELL TO PERFECTLY
LITTLE OR NOT AT ALL

SENSE OF ACCOMPLISHMENT GAINED FROM WORK:
SATISFIED
NEUTRAL
DISSATISFIED

REENLISTMENT INTENTIONS:
YES, OR PROBABLY YES
NO, OR PROBABLY NO
PLAN TO RETIRE

NOTE: Information not included in previous survey
Columns may not add to 100 percent due to rounding

TABLE 45

COMPARISON OF JOB SATISFACTION INDICATORS BY ACTIVE DUTY SPECIALTY JOBS
(PERCENT MEMBERS RESPONDING)

NETWORK ADMIN. CLUSTER (ST173) (N=62)	SM. COMP & PERIPH EQUIP MAINT (ST113) (N=254)	GEN COMP & SWITCH MAINT (ST133) (N=812)	COMBAT COMM CLUSTER (ST127) (N=119)	SUPERVISORY CLUSTER (ST228) (N=267)
89	74	67	63	70
8	12	17	22	17
2	14	16	15	13
92	80	77	72	81
8	20	23	28	18
56	65	77	60	72
44	35	24	39	28
84	67	61	63	68
5	15	13	17	9
11	18	25	20	23
47	63	61	68	62
44	32	34	31	9
8	6	4	1	28

EXPRESSED JOB INTEREST:

INTERESTING
SO-SO
DULL

PERCEIVED UTILIZATION OF TALENTS:

FAIRLY WELL TO PERFECTLY
LITTLE OR NOT AT ALL

75

PERCEIVED UTILIZATION OF TRAINING:

FAIRLY WELL TO PERFECTLY
LITTLE OR NOT AT ALL

SENSE OF ACCOMPLISHMENT GAINED FROM WORK:

SATISFIED
NEUTRAL
DISSATISFIED

REENLISTMENT INTENTIONS:

YES, OR PROBABLY YES
NO, OR PROBABLY NO
WILL RETIRE

NOTE: Columns may not add to 100 percent due to rounding or nonresponse

TABLE 45 (CONTINUED)

COMPARISON OF JOB SATISFACTION INDICATORS BY ACTIVE DUTY SPECIALTY JOBS
(PERCENT MEMBERS RESPONDING)

	HQ STAFF NCO JOB (ST337) (N=12)	QUALITY ASSURANCE JOB (ST438) (N=14)	JOB CONTROL (ST465) (N=13)	TECHNICAL TRAINING INSTRUCTOR JOB (ST464) (N=20)
<u>EXPRESSED JOB INTEREST:</u>				
INTERESTING	75	71	46	80
SO-SO	17	21	31	10
DULL	8	7	23	10
<u>PERCEIVED UTILIZATION OF TALENTS:</u>				
FAIRLY WELL TO PERFECTLY	83	64	38	80
LITTLE OR NOT AT ALL	17	36	62	20
<u>PERCEIVED UTILIZATION OF TRAINING:</u>				
FAIRLY WELL TO PERFECTLY	33	64	23	80
LITTLE OR NOT AT ALL	67	36	77	20
<u>SENSE OF ACCOMPLISHMENT GAINED FROM WORK:</u>				
SATISFIED	67	57	54	75
NEUTRAL	8	21	23	5
DISSATISFIED	25	21	23	20
<u>REENLISTMENT INTENTIONS:</u>				
YES, OR PROBABLY YES	58	79	46	70
NO, OR PROBABLY NO	8	21	46	25
WILL RETIRE	33	0	8	5

NOTE: Columns may not add to 100 percent due to rounding or nonresponse

IMPLICATIONS

This survey was initiated to provide current job and task data for use in evaluating AFMAN 36-2108 *Specialty Description* and appropriate training documents.

Survey results indicate the present classification structure, as described in the latest specialty description, accurately portrays the jobs performed in this career ladder. Career ladder training documents appear to be well supported by survey data. As was pointed out in the **JOB SATISFACTION ANALYSIS** section, job satisfaction responses by AFSC 2E2X1 personnel reported the utilization of training is adequate, indicating support for the overall training system. Reenlistment intentions for current first- and second-enlistment personnel was less than that of the previous two surveys. Additionally, career ladder progression is typical, with the move from technical work at the 3- and 5-skill levels to supervisory and management at the 7-skill level.

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APPENDIX A
SELECTED REPRESENTATIVE TASKS PERFORMED BY
MEMBERS OF CAREER LADDER JOBS

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TABLE A1
 NETWORK ADMINISTRATOR CLUSTER
 (ST173)

TASKS	PERCENT MEMBERS PERFORMING (N=62)
D253 Isolate malfunctions to LAN components, such as routers, servers, or hubs	98
D254 Isolate malfunctions to LANs	95
A73 Perform operational checks of local area network (LAN) components, such as routers, servers, or hubs	90
A74 Perform operational checks of LANs	87
D314 Isolate malfunctions within LAN components, such as routers, servers, or hubs	85
A52 Perform network management procedures	77
D205 Discriminate between hardware and software failures	71
H511 Connect or disconnect fiber optic cables to or from interface equipment	63
G498 Remove or replace twisted-pair cables	60
M738 Configure workstations	56
H512 Hand polish fiber optic connectors	50
H516 Isolate malfunctions to fiber optic connectors	50
H513 Hand polish fibers in fiber optic cables	48
A55 Perform site survey evaluations	45
E406 Remove or replace mouse devices	45
H519 Isolate malfunctions to fiber optic patch panels	44
A56 Perform system recovery procedures	39
G479 Isolate malfunctions to cables	39
G489 Remove or replace cable runs	39
G491 Remove or replace coaxial cables	37
D271 Isolate malfunctions to printers	37
A54 Perform power-up or power-down procedures	37
M746 Load or operate programs	34
Q891 Conduct OJT	34
A82 Perform operational checks of printers	34
M737 Conduct operational tests and acceptances of program software	32
B136 Perform PMIs on LAN components, such as routers, servers, or hubs	32
A1 Analyze equipment outages or malfunction reports	31
B137 Perform PMIs on LANs	31

TABLE A2

SMALL COMPUTER AND PERIPHERAL EQUIPMENT MAINTENANCE CLUSTER
(ST113)

TASKS	PERCENT MEMBERS PERFORMING (N=254)
A54 Perform power-up or power-down procedures	89
D205 Discriminate between hardware and software failures	87
E420 Remove or replace power supplies	87
A82 Perform operational checks of printers	86
A81 Perform operational checks of power supplies	85
D269 Isolate malfunctions to power supplies	84
A72 Perform operational checks of keyboards	82
A27 Connect or disconnect power, power panels, or equipment leads	81
N752 Access core automated maintenance system (CAMS) menus and data screens	78
D271 Isolate malfunctions to printers	78
E423 Remove or replace printers	74
A68 Perform operational checks of display equipment	73
E394 Remove or replace keyboards	73
D251 Isolate malfunctions to keyboards	73
A83 Perform operational checks of processors	72
B149 Perform PMIs on printers	72
F458 Inspect cables for corrosion	71
D237 Isolate malfunctions to display equipment, such as CRTs	69
B135 Perform PMIs on keyboards	69
E376 Remove or replace display equipment, such as CRTs	69
G479 Isolate malfunctions to cables	69
E387 Remove or replace fuses	68
D272 Isolate malfunctions to processors	67
F457 Inspect cabinets for corrosion	67
A43 Pack or tag components or spare parts	66
B131 Perform PMIs on display equipment, such as CRTs	65
E411 Remove or replace nonelectrical hardware, such as screws, nuts, ejectors, or covers	64
G486 Perform inspections of cables, cable troughs, or connectors, other than for corrosion	64
F467 Remove corrosion from metal surfaces	64

TABLE A3
 GENERAL COMPUTER AND SWITCHING MAINTENANCE CLUSTER
 (ST 133)

TASKS	PERCENT MEMBERS PERFORMING (N=812)
A54 Perform power-up or power-down procedures	89
D205 Discriminate between hardware and software failures	87
E420 Remove or replace power supplies	87
A82 Perform operational checks of printers	86
A81 Perform operational checks of power supplies	85
D269 Isolate malfunctions to power supplies	84
A72 Perform operational checks of keyboards	82
A27 Connect or disconnect power, power panels, or equipment leads	81
N752 Access core automated maintenance system (CAMS) menus and data screens	78
D271 Isolate malfunctions to printers	78
E423 Remove or replace printers	74
A68 Perform operational checks of display equipment	73
E394 Remove or replace keyboards	73
D251 Isolate malfunctions to keyboards	73
A83 Perform operational checks of processors	72
B149 Perform PMIs on printers	72
F458 Inspect cables for corrosion	71
D237 Isolate malfunctions to display equipment, such as CRTs	69
B135 Perform PMIs on keyboards	69
E376 Remove or replace display equipment, such as CRTs	69
G479 Isolate malfunctions to cables	69
E387 Remove or replace fuses	68
D272 Isolate malfunctions to processors	67
F457 Inspect cabinets for corrosion	67
A43 Pack or tag components or spare parts	66
B131 Perform PMIs on display equipment, such as CRTs	65
E411 Remove or replace nonelectrical hardware, such as screws, nuts, ejectors, or covers	64
A76 Perform operational checks of maintenance or operator panels or consoles	60
S954 Inventory equipment, tools, parts, or supplies	60

TABLE A4
 COMBAT COMMUNICATIONS CLUSTER
 (ST127)

TASKS	PERCENT MEMBERS PERFORMING (N=119)
O780 Erect camouflage nettings	87
O781 Erect tents	87
O778 Don or doff chemical warfare personal protective clothing	82
O798 Perform pallet buildup activities	78
O802 Prepare electronic computer or switching systems for operation at deployed locations	76
O793 Participate in convoy exercises	76
A54 Perform power-up or power-down procedures	71
O799 Perform predeployment inspections of electronic computer or switching systems equipment	71
O807 Set up or tear down shelters	69
O792 Palletize mobility or contingency equipment for shipment or movement	67
O791 Operate M-series vehicles during contingency exercises or operations	64
O784 Inspect mobility bags or kits	64
D205 Discriminate between hardware and software failures	64
A27 Connect or disconnect power, power panels, or equipment leads	61
O782 Identify chemical warfare agents	60
E349 Remove or replace batteries	58
N752 Access core automated maintenance system (CAMS) menus and data screens	54
O788 Operate chemical warfare personal protective equipment during contingency exercises or operations	49
M745 Load crypto variables	47
O800 Perform predeployment inspections of mobile support equipment	46
O785 Inspect packed or palletized mobility or contingency equipment prior to transport	45
O790 Operate portable radios, such as field radios, during contingency exercises or operations	40

TABLE A5
SUPERVISORY CLUSTER
(ST228)

TASKS	PERCENT MEMBERS PERFORMING (N=267)
P879 Supervise military personnel	93
P821 Counsel subordinates concerning personal matters	91
P825 Determine or establish work assignments or priorities	88
P817 Conduct supervisory performance feedback sessions	87
P867 Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	86
P884 Write recommendations for awards or decorations	85
P852 Evaluate personnel for compliance with performance standards	84
P863 Inspect personnel for compliance with military standards	83
P819 Conduct supervisory orientations for newly assigned personnel	81
P842 Establish performance standards for subordinates	80
P811 Assign personnel to work areas or duty positions	79
P882 Write performance reports or supervisory appraisals	78
P814 Conduct general meetings, such as staff meetings, briefings, conferences, or workshops	76
P864 Interpret policies, directives, or procedures for subordinates	76
P853 Evaluate personnel for promotion, demotion, reclassification, or special awards	76
P875 Schedule personnel for temporary duty (TDY) assignments, leaves, or passes	74
P831 Develop or establish work schedules	74
P877 Schedule work assignments or priorities	73
Q905 Maintain training records or files	72
P815 Conduct self-inspections or self-assessments	72
P830 Develop or establish work methods or procedures	72
P833 Direct training functions	71
P855 Evaluate work schedules	67
P823 Determine or establish logistics requirements, such as personnel, equipment, tools, parts, supplies, or workspace	67
Q899 Evaluate personnel to determine training needs	66
P850 Evaluate logistics requirements, such as personnel, equipment, tools, parts, supplies, or workspace	63

TABLE A6
HEADQUARTERS STAFF NCO JOB
(ST337)

TASKS	PERCENT MEMBERS PERFORMING (N=12)
P867 Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	92
P868 Plan briefings, conferences, or workshops	92
P835 Draft agenda for general meetings, such as staff meetings, briefings, conferences, or workshops	92
P870 Plan equipment replacement programs	83
P823 Determine or establish logistics requirements, such as personnel, equipment, tools, parts, supplies, or workspace	83
P814 Conduct general meetings, such as staff meetings, briefings, conferences, or workshops	83
P820 Coordinate host-tenant or interservice agreements with appropriate agencies	83
R941 Write minutes of briefings, conferences, or meetings	83
P845 Evaluate budget requirements	83
R917 Coordinate requests for TDY orders with appropriate agencies	83
P848 Evaluate job or position descriptions	83
P883 Write staff studies, surveys, or routine reports, other than training or inspection reports	75
P850 Evaluate logistics requirements, such as personnel, equipment, tools, parts, supplies, or workspace	75
P839 Establish administrative files, such as correspondence files or classified files	75
R940 Safeguard classified materials	75
R926 Initiate requests for TDY orders	75
P834 Draft budget requirements	67
P874 Review drafts of policy directives, manuals, or instructions	67
P876 Schedule staff assistance visits, inspections, or audits	67
R928 Maintain administrative files	67
P841 Establish organizational policies, such as operating instructions (OIs) or standard operating procedures (SOPs)	58
P860 Initiate host-tenant or interservice agreements	58
R914 Annotate security forms for facilities or security containers	58

TABLE A7
 QUALITY ASSURANCE JOB
 (ST438)

TASKS	PERCENT MEMBERS PERFORMING (N=14)
P818 Conduct safety inspections of equipment or facilities	100
N752 Access core automated maintenance system (CAMS) menus and data screens	93
N763 Retrieve CAMS listings or reports	86
P880 Write inspection reports	79
P854 Evaluate safety or security programs	79
N754 Analyze CAMS data	79
N768 Update personnel data files in CAMS	79
N764 Review preventive maintenance schedules	79
F458 Inspect cables for corrosion	79
F460 Inspect electronic drawers for corrosion	79
P852 Evaluate personnel for compliance with performance standards	71
Q902 Evaluate effectiveness of training programs, plans, or procedures	71
P846 Evaluate inspection report findings or inspection procedures	71
P828 Develop self-inspection or self-assessment program checklists	71
F456 Inspect bus bars for corrosion	71
F457 Inspect cabinets for corrosion	71
F465 Inspect station grounds for corrosion	71
N757 Evaluate deficiency, service, or status reports, such as RODs	71
R933 Maintain TO libraries	64
P816 Conduct staff assistance visits, inspections, or audits	64
R929 Maintain ATOMS accounts	64
P847 Evaluate job hazards or compliance with Air Force Occupational Safety and Health (AFOSH) program	64
N770 Verify CAMS products	64
N765 Track ancillary training in CAMS	64
P815 Conduct self-inspections or self-assessments	64
R939 Review TO changes	64
F461 Inspect frames for corrosion	64

TABLE A8

JOB CONTROLLER JOB
(ST 435)

TASKS	PERCENT MEMBERS PERFORMING (N=13)
N764 Review preventive maintenance schedules	100
N754 Analyze CAMS data	100
N752 Access core automated maintenance system (CAMS) menus and data screens	92
N763 Retrieve CAMS listings or reports	85
N770 Verify CAMS products	85
N767 Update maintenance data collection (MDC) data using CAMS	85
A1 Analyze equipment outages or malfunction reports	85
S943 Assign job control numbers	77
N753 Adjust daily maintenance plans to meet operational commitments	77
N766 Update historical reports in CAMS	77
N755 Clear Red-X conditions	69
N768 Update personnel data files in CAMS	69
A36 Dispatch crews to work projects	62
N756 Coordinate deficiency, service, or status reports, such as reports of deficiency (RODs), with appropriate agencies	54
S946 Coordinate maintenance of equipment with appropriate agencies	46
N757 Evaluate deficiency, service, or status reports, such as RODs	46
N765 Track ancillary training in CAMS	46
O793 Participate in convoy exercises	38
N758 Evaluate equipment development or modification data	38
A34 Coordinate troubleshooting with inside or outside plant crews	38
O791 Operate M-series vehicles during contingency exercises or operations	31
R932 Maintain TCTOs	31
S944 Assign workorder numbers to equipment	23
A37 Inform communications control of arrivals, departures, or maintenance progress	23

TABLE A9
 TECHNICAL TRAINING INSTRUCTOR JOB
 (ST464)

TASKS	PERCENT MEMBERS PERFORMING (N=20)
Q890 Conduct formal course classroom training	95
Q894 Develop formal course curricula, plans of instruction (POIs), or specialty training standards (STSs)	95
Q896 Develop training materials or aids	95
Q903 Evaluate progress of trainees	90
Q906 Personalize lesson plans	85
Q895 Develop performance tests	85
Q912 Write test questions	85
Q886 Administer or score tests	85
Q904 Inspect training materials or aids for operation or suitability	80
Q905 Maintain training records or files	75
Q897 Develop training programs, plans, or procedures	70
Q898 Establish or maintain study reference files	65
Q902 Evaluate effectiveness of training programs, plans, or procedures	65
Q889 Complete student entry or withdrawal forms	65
Q909 Procure training aids, space, or equipment	65
Q893 Determine training requirements	60
Q910 Schedule training	55
Q899 Evaluate personnel to determine training needs	55
Q888 Brief organizational personnel concerning training programs or matters	55
Q900 Evaluate training methods or techniques of instructors	50
Q892 Conduct training conferences, briefings, or debriefings	50
Q913 Write training reports	35
Q901 Evaluate training requirements for instructors	35
P867 Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	35
P863 Inspect personnel for compliance with military standards	30
P833 Direct training functions	20

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