

**UNITED STATES
AIR FORCE**

OCCUPATIONAL SURVEY REPORT



VISUAL IMAGERY AND INTRUSION DETECTION SYSTEMS

AFSC 2E1X4

OSSN: 2530

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**OCCUPATIONAL ANALYSIS PROGRAM
AIR FORCE OCCUPATIONAL MEASUREMENT SQUADRON
AIR EDUCATION and TRAINING COMMAND
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PREFACE

This report presents the results of an Air Force Occupational Survey of the Visual Imagery and Intrusion Detection Systems career ladder (AFSC 2E1X4). Authority for conducting an occupational survey is contained in AFI 36-2623. Copies of this report and pertinent computer printouts are distributed to the Air Force Career Field Manager, technical training school, all major using commands, and other interested operations and training officials.

First Lieutenant Holly Hector, Inventory Development Specialist, developed the survey instrument. Second Lieutenant Amber Kimbrell, Occupational Analyst, analyzed the data and wrote the final report. Ms. Karen Tilghman provided computer-programming support, and Ms. Sherry Evans provided administrative support. Major Jose Caussade, Chief, Enlisted Analysis Section, reviewed and approved this report for release.

Additional copies of this report may be obtained by writing to AFOMS/OAOD, 1550 5th Street East, Randolph AFB TX 78150-4449, or by calling DSN 487-5543. For information on the Air Force occupational survey process or other on-going projects, visit our website at <https://www-r.omsq.af.mil/>. (Note: If you experience a Microsoft Word security problem after clicking on the above link, please copy the web address into the Address window in your web browser.)

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**OCCUPATIONAL SURVEY
VISUAL IMAGERY AND INTRUSION DETECTION SYSTEMS
(AFSC 2E1X4)**

EXECUTIVE SUMMARY

1. Survey Coverage: The Visual Imagery and Intrusion Detection Systems career ladder was surveyed to obtain current task and equipment data for use in evaluating current training programs. The data will also be used to support specialty knowledge test (SKT) development. Surveys were sent to 423 active duty (AD), 67 Air National Guard (ANG), and 6 Air Force Reserve Command (AFRC) personnel. Survey results were based on 271 members responding (245 AD, 26 ANG, and 0 AFRC).

2. Specialty Jobs: Job structure analysis identified two clusters and three independent jobs (IJs) within the specialty. This career ladder contains a wide variety of jobs, but the majority of the members are performing similar tasks within the Visual Imagery Maintenance Cluster. First-enlistment personnel perform the largest percentage of their tasks in the general maintenance and intrusion detection systems maintenance areas. Other areas within the Visual Imagery and Intrusion Detection Systems environment that warranted discussion include photographic maintenance and management and supervision and training activities.

3. Career Ladder Progression: The Visual Imagery and Intrusion Detection Systems career ladder progression is typical of most career ladders. There was a distinction between 3- and 5-skill-level members, with the 3-skill-level members performing more general maintenance and intrusion detection systems maintenance activities than all other skill levels. The 5-skill-level members primarily perform visual imagery maintenance. One-fourth of all 5-skill-level members also perform management and supervisory activities. The 7-skill-level members spend the most concentrated amount of job time (27%) performing supervision and management activities.

4. Training Analysis: The course training standard (CTS) for the specialty, dated 1 October 2003, was reviewed against the survey data. The CTS is supported by the survey data—fewer than 10 inconsistencies were found in the tasks matched to the CTS. A complete review of the CTS has been provided to the technical school for evaluation. The plans of instruction (POIs) for both 3-skill-level courses were also reviewed. The Keesler POI had only a limited number of discrepancies. The Ft Meade Basic Television Equipment Maintenance (BTVEM) POI had a significant amount of discrepancies and should be considered for revision.

5. Job Satisfaction Analysis: The lowest levels of job satisfaction in AFSC 2E1X4 were found among the Photographic Maintenance IJ members. Also, most members across all specialty jobs and TAFMS groups report poor use of training received. AFSC 2E1X4 members have generally lower job satisfaction ratings compared to the previous 2E1X4 study as well as for other 2E1XX AFSCs.

6. Retention Dimensions: Members in the three TAFMS groups (1-48 months' TAFMS, 49-96 months' TAFMS, and 97+ months' TAFMS) agreed on several factors potentially influencing their decision to reenlist or separate. Top factors for reenlistment included "job security", "military-related education and training opportunities", and "medical or dental care for AD member". The three TAFMS groups were in agreement concerning the top factors for separation, which included "military lifestyle", "pay and allowances", and "civilian job opportunities".

INTRODUCTION

Air Force Occupational Measurement Squadron (AFOMS)

Occupational Analysis Program

Our mission is to provide occupational data for decision makers, allowing them to make informed personnel, training, and education decisions, based not on opinion and conjecture, but on empirical, quantitative data.

Survey Development Process

An occupational survey begins with a job inventory (JI) -- a list of all the tasks performed by members of a given Air Force Specialty Code (AFSC) as part of their actual career field work (that is, additional duties and the like are not included). We include every function that career field members perform by working with technical training personnel and operational subject-matter experts (SMEs) to produce a task list that is complete and understandable to the typical job incumbent. The SMEs write each task to the same level of specificity across duty areas, and no task is duplicated in the task list.

In addition to this comprehensive task list, job inventories include a number of background questions that deal with demographic information, job satisfaction, equipment usage, and any other area that our customers, such as career field managers (CFMs) and technical school personnel, may request.

Furthermore, the JI is only one of the survey instruments that AFOMS produces. The JI task list is used in creating several other surveys that are important for developing and refining career field training programs and for developing career field promotion tests; these surveys and how their results are used will be described later in this report.

Survey respondents are asked to examine all tasks in the JI and select each task that they perform in their present job. They are then asked to rate each task they chose on a scale of 1 to 9 according to how much relative time they spend performing that task in their present job, compared to all the other tasks in the inventory. These ratings are converted into estimates of actual relative job time spent performing each task.

Survey Analysis

Survey responses are processed using a set of computer programs called the Comprehensive Occupational Data Analysis Programs (CODAP). We are able to calculate some important basic information about each task from the information that respondents provide in the JI: the percent members performing (PMP) and the percent time spent (PTS). CODAP forms groups of survey respondents according to the similarity of their task performance, and our analysts study these groupings to identify distinct jobs. Further, we can provide PMP and PTS information for any subgroup. For example, we can easily determine the percent of E-5s or 3-skill-level or first-term

airmen who perform each task, and estimate the average amount of job time they spend performing it. This is important because many of the applications of our data target particular subgroups within the career ladder.

Uses of Survey Data

Survey results are formally reported in an **occupational survey report (OSR)**. The OSR is by no means the only product of an occupational survey study. The OSR provides a high-level "snapshot" of an entire AFSC in a compact package, but it is not intended to provide the comprehensive information needed to support important decisions about a career field. That is the purpose of "data extracts," which are comprehensive, detailed sets of CODAP-generated reports designed for particular applications.

The Training Extract -- AFOMS survey data are essential to technical training personnel. The training extract provides information about what career ladder incumbents are actually doing in their jobs at each stage of their career, along with supporting information regarding when and how members should be trained to perform their jobs. The data found in the training extract regarding first-term and 3-skill-level members are the *primary source of empirical information* available to support such decisions.

In addition to the JI, AFOMS produces two other surveys that directly support the training community. Depending on the size of the career ladder, a sample of at least 50 (and frequently 100 or more) 7-skill-level craftsmen is selected to complete a training emphasis (TE) survey. A similar-sized sample of other 7-skill-level craftsmen is selected to complete a task difficulty (TD) survey.

The TE survey, like the JI, contains the complete career ladder task list, and, like the JI, respondents are asked to rate tasks on a 1 to 9 scale (tasks not rated by the respondent are assigned a "0" rating). Unlike the JI, however, respondents are asked to rate tasks based on how much emphasis they believe should be placed on that task for entry-level structured training. A "1" rating indicates the respondent's belief that very little emphasis be placed on providing structured training on that task. A rating of "9" indicates that it is essential to provide structured training on the task. Structured training is defined as resident technical schools, field training detachments, mobile training teams, formal on-the-job training (OJT), or any other organized training method. The responses of the entire sample of raters are averaged for each task, and the result is a TE rating for each task.

The TD survey also contains the full task list and requests that respondents rate each task *with which they are familiar* on a scale of 1 to 9 ("1" is low, "9" is high), but this time respondents are asked to rate the amount of time needed to learn to perform that task satisfactorily. In other words, as the name implies, TD is an indicator of how difficult the task is to perform. The average TD rating for each task in the inventory is standardized with a mean rating of 5.0 and a standard deviation of 1.0.

When used in conjunction with the PMP and PTS for first-enlistment members, average TE and TD ratings provide insight into the appropriate training requirements for new personnel in

the career ladder. These four indices (PMP, PTS, TE, and TD) are used to compute a composite index, the automated training indicator (ATI), for each task. The ATI expresses, in a single number between 1 and 18, the most appropriate training setting and approach for providing training for that task. ATIs allow training developers to quickly focus attention on those tasks that are most likely to qualify for resident course consideration. Further information concerning TE and TD ratings and ATIs for the entire task list can be found in the training extract that accompanies this OSR.

The major users of training extract information are attendees at utilization and training workshops (U&TWs). The U&TW is a summit of representative career ladder, training, and classification leaders who evaluate current training efficiency and effectiveness in order to propose and approve changes to the specialty training standard (STS) or course training standard (CTS), particularly with regard to 3-skill-level training, and to address utilization issues. The AFSC's job description in Attachment 6 of AFMAN 36-2108, *Enlisted Classification*, is also reviewed and appropriately revised in light of the survey data to reflect the jobs being performed by the career ladder members.

Part of the process of compiling the training extract involves the *STS matching* process, during which technical school personnel match JI tasks to STS elements; that is, they tell us what particular task or tasks correspond to each STS element when it is covered in training. This is especially useful when STS performance codes are being reviewed for the 3-skill-level course. For example, the U&TW attendees might be asked to consider adding a task performance code to an STS element that previously has been trained only to a knowledge level. JI, TE, and TD data, combined in the form of the ATI, are important in determining the appropriate proficiency code. Separate training extracts are produced for active duty (AD), Air National Guard (ANG), and Air Force Reserve Command (AFRC) members.

The Specialty Knowledge Test (SKT) Extract -- AFOMS survey data are key to ensuring that SKTs are valid. SKTs are an important part of the Weighted Airman Promotion System (WAPS). Since an airman's test score is frequently the deciding factor in determining who is promoted, SKTs must be valid, fair, and credible.

In terms of SKTs, *valid* means that every question on the test is tied to a task which has been shown to be important to successful performance in the specialty. This tie is crucial to documenting the validity of SKT content.

AFOMS surveys provide test writers with information on the PMP, PTS, TD, and TE. This information is combined to produce a composite index called the predicted testing importance (PTI). Those tasks that are rated highest in PTI are ones that tend to be high in all four of our primary indices -- PMP, PTS, TD, and TE -- exactly the kinds of tasks that one would generally consider job-essential and that should form the basis for test questions. PTI information is used for minor test revisions; how it is used will be explained shortly.

Field-validated testing importance (FVTI) data are produced for major test revisions. Approximately 6 months before the start of test development, a sample of 100 senior career field NCOs is sent a survey containing a list of the 150-200 tasks rated highest in PTI. Respondents

are asked to provide a 1-7 rating ("1" is low, "7" is high) of how important they believe it is to include a question concerning that task on the SKT. The responses are averaged for each task, yielding the FVTI index -- a direct measure of the opinions of career field experts as to what constitutes "job-essential" knowledge.

PTI and FVTI information is included in the SKT extract, which is specifically tailored for use by the SKT teams who come to AFOMS to write the promotion examinations. Two sets of reports are prepared -- one set uses only data for E-5s and the other uses combined data for E-6s and E-7s. Each report gives the SKT team information on every task's PMP, PTS, and PTI, and, for major test revisions, FVTI data. Occupational survey data are thus the only objective source of information available to the team regarding how to make the test they write meet legal requirements for validity and fairness.

The Analysis Extract -- The analysis extract is an archive of all the data collected in the course of a study that are not incorporated into one of the other extracts. We typically produce separate analysis extracts for AD and ANG/AFRC members. The analysis extract is usually an enormous document, a compilation of the many reports that "slice and dice" the data in virtually every potentially useful way. Just about any question anyone has regarding career ladder work, personnel, or training and utilization issues can be answered by consulting one or another of the reports in the analysis extract.

The Occupational Survey Report -- The OSR captures survey data and analysis both in breadth and depth. For ease of reading, the first half of the OSR concentrates on breadth with compelling factors and implications across the specialty. Tables following the narrative show depth with regard to these factors and implications. Where appropriate, highlights of the tables are contained in the body.

OCCUPATIONAL SURVEY REPORT (OSR) VISUAL IMAGERY AND INTRUSION DETECTION SYSTEMS (AFSC 2E1X4)

This is a report of an occupational survey of the Visual Imagery and Intrusion Detection Systems career ladder, conducted by the Occupational Analysis Flight, AFOMS. The OSR reports the findings of current data that are available for use in guiding the development and evaluation of training and support planned changes within this career ladder. In addition, the data are used to support SKT development. The previous OSR was completed in April 2000.

Career Ladder Background

According to the specialty description in AFMAN 36-2108, *Enlisted Classification*, dated 31 October 03, personnel in this career ladder install, operationally check, inspect, troubleshoot, repair, overhaul, calibrate, modify, test, and analyze the performance of television equipment; cable head-end; audio, radiated, and auxiliary broadcast equipment; fixed and mobile combat camera and other imagery-related equipment; and intrusion detection systems. Personnel monitor and direct performance checks of television and intrusion detection systems. They also ensure continuous acceptable systems performance and manage television, imagery, and intrusion detection systems facilities.

The initial technical training schools for this AFSC are located at Keesler AFB MS and Ft Meade MD. All personnel entering the AFSC 2E1X4 career ladder must attend the 48-day E3AQR2E134 481, *Electronic Principles*, course at Keesler AFB MS. They then continue with the 28-day E3AQR2E134 005, *Visual Imagery and Intrusion Detection Systems (VIIDS) Apprentice*, course at Keesler AFB MS, and finally the 87-day E5ABD2E134 005, *Visual Imagery and Intrusion Detection Systems Maintenance*, course at Ft Meade MD. These courses provide graduates with the knowledge and skills for the following principles and activities:

- Tasks related to safety, first aid, direct current (DC) principles, alternating current (AC) principles, semiconductors, power supplies, amplifiers, waveshaping circuits, digital circuits, computer fundamentals, network theory, and soldering
- Maintenance of intrusion detection systems, including systems overview of typical annunciators, interior sensors, camera surveillance systems, and unique test equipment
- Diagram analysis, systems operation, maintenance fault detection, fault isolation and removal, and replacement action to the lowest replaceable unit
- Operation, fundamental maintenance, maintenance and supply procedures, and repair skills for all aspects of television systems including practical hands-on training in the use of test equipment, troubleshooting, and repair of monitors, receivers, television cameras, videotape recorders, audio systems, broadcast studio, and transmission systems

Entry into AFSC 2E1X4 requires an Armed Forces Vocational Aptitude Battery (ASVAB) “electronics” score of 67 and a strength requirement of “J” (weight lift of 60 pounds). Members must also have normal color vision, as defined in AFI 48-123, *Medical Examination and Standards*. In addition, this specialty requires routine access to Secret material or similar environment. For award and retention of AFSC 2E1X4, completion of a current National Agency Check, Local Agency Checks and Credit (NACLC) according to AFI 31-501, *Personnel Security Program Management*, must be completed. (**NOTE:** Award of the 3-skill level without a completed NACLC is authorized provided an interim NACLC has been granted according to AFI 31-501.) Finally, this AFSC is not open to non-United States citizens but is open to United States nationals.

SURVEY METHODOLOGY

Inventory Development

The data collection instrument for this occupational survey was USAF job inventory (JI) occupational survey study number (OSSN) 2530, dated August 2002. During the development of the comprehensive task list, 45 subject-matter experts from 7 operational bases representing 9 operational units and 2 training units were interviewed. The survey requested such standard background information as: base of assignment; command of assignment; total active federal military service (TAFMS), time in career field (TICF), and time in present job (TIPJ); job title; work or functional area; paygrade; job satisfaction and reenlistment intentions; and systems, tools, and equipment used, operated, or maintained. Additional background items concerned the number of deployments and days TDY and if personnel assigned to a one-person shop felt that they were adequately trained to perform that job. The inventory listed 513 tasks grouped under 17 duty headings and a background section. (The complete survey is available on the CD containing the products from this study.)

<u>BASE</u>	<u>REASON FOR VISIT</u>
Keesler AFB MS	Technical training school
Fort Meade MD	Defense Information School (DINFOS), technical training school
Kirtland AFB NM	Selectively manned unit, supports Office of the Secretary of Defense (OSD), Joint Staff, and Nuclear Commanders in Chief (CINCs)
Lackland AFB TX	Combat camera support to DoD entities; joint session with AFNEWS personnel
Charleston AFB SC	Combat camera squadron
Minot AFB ND	Provides direct support to two legs of Strategic Nuclear Triad (B-52H and Minuteman III)

Nellis AFB NV	Home to largest advanced air combat training; SMEs with various backgrounds
Beale AFB CA	Mobile and fixed photographic imagery production and dissemination facilities
Barksdale AFB LA	Intrusion detection systems maintenance

AFSC 2E1X4 Survey Administration

From September to December 2002, survey control monitors at the technical training school and operational bases administered the inventory to all eligible DAFSC 2E134, 2E154, and 2E174 AD, ANG, and AFRC personnel. Members ineligible to take the survey included the following: (1) hospitalized members; (2) members in transition for a permanent change of station; (3) members retiring within the time the inventories were administered to the field; and (4) members who had been in their present jobs for less than 6 weeks. Participants were selected from a computer-generated mailing list obtained from data tapes maintained by the Air Force Personnel Center, Randolph AFB TX.

Survey Sample

The data on survey returns were examined to ensure that the final sample reflected an accurate representation across major commands (MAJCOMs), paygrades, and skill levels. [Table 1](#) displays the distribution of the survey sample by MAJCOM, while [Table 2](#) displays the survey distribution by paygrade groups. [Table 3](#) displays the final sample distribution by skill level. [Table 4](#) displays the component characteristics for the AD, ANG, and AFRC members in the final sample.

TABLE 1

MAJCOM REPRESENTATION OF SAMPLE

<u>COMMAND</u>	<u>PERCENT OF ASSIGNED*</u>	<u>PERCENT OF SAMPLE</u>
ACC	20	20
AETC	12	13
AFNEWS	11	13
USAFE	12	10
ANG	11	10
AMC	7	8
PACAF	7	7
AFSPC	5	7
AFOFA	2	4
AFMC	3	4
AFPCA	2	0
AFRC	2	0
OTHER**	3	4

TOTAL ASSIGNED* = 603

TOTAL ELIGIBLE***= 514

TOTAL SURVEYED = 496

TOTAL IN SURVEY SAMPLE = 271

PERCENT OF ASSIGNED IN SAMPLE = 45%

PERCENT OF ELIGIBLE IN SAMPLE = 53%

PERCENT OF SURVEYED IN SAMPLE = 55%

* Assigned strength as of August 2003

** Other includes: USEUC; STRAT; DISA; AFSOC

*** Ineligibility defined as: hospitalized members; members in transition for a permanent change of station; members retiring within the time the inventories were administered to the field; and members who had been in their present jobs for less than 6 weeks.

Note: Columns may not add to 100% due to rounding

TABLE 2**PAYGRADE DISTRIBUTION OF SAMPLE**

<u>PAYGRADE</u>	<u>PERCENT OF ASSIGNED*</u>	<u>PERCENT OF SAMPLE</u>
E-1 - E-3	17	16
E-4	20	25
E-5	28	22
E-6	20	21
E-7	14	16
E-8	1	0

* As of August 2003

TABLE 3**SKILL-LEVEL DISTRIBUTION OF SAMPLE**

<u>SKILL LEVEL</u>	<u>PERCENT OF ASSIGNED*</u>	<u>PERCENT OF SAMPLE</u>
2E134	28	27
2E154	40	42
2E174	32	31

* As of August 2003

TABLE 4
COMPONENT CHARACTERISTICS

	<u>AD</u>	<u>ANG</u>	<u>AFRC</u>
ASSIGNED*	523	68	12
SURVEYED	423	67	6
SAMPLE	245	26	0
% OF SURVEYED	58%	39%	0

* As of August 2003

The command, paygrade, and skill-level distributions of the survey sample are close to the percent assigned, indicating that the sample is a good representation of the career ladder population. As indicated by [Table 4](#), no AFRC personnel are in the survey sample.

AFSC 2E1X4 SPECIALTY JOBS

The first step in the analysis process is to identify the career ladder structure in terms of the jobs performed by the respondents. CODAP creates 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 the similarity of tasks and time spent ratings. Human analysis of the final output, aided by additional measures of similarities and differences between groups, determines the final job structure of the career field as described below.

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**. Jobs not falling within any cluster are identified as **Independent Jobs (IJs)**. The structure of the career ladder is then defined in terms of clusters, jobs, and independent jobs. The job structure resulting from this grouping process (the various jobs within the AFSC) can be used to evaluate the changes that have occurred in the AFSC since the previous OSR. It can also be used to guide future changes in the AFSC. The above terminology will be used in the discussion of the 2E1X4 career ladder.

Overview of Specialty Jobs

Based on the analysis of tasks performed and the amount of time spent performing each task, two clusters and three independent jobs were identified within the Visual Imagery and Intrusion

Detection Systems career ladder. [Figure 1](#) displays this job structure. [Table 5](#) displays the relative percent time spent on duty areas by specialty clusters and jobs. A written outline of the job structure follows. The stage (STG) number shown beside each title refers to computer-generated tracking information. The letter “N” represents the number of members in each group. [Tables A1-A5c](#) (in the Appendix) provide detailed descriptions of the clusters and jobs listed below. In addition, the tables display some distinguishing tasks performed by members of jobs identified within the clusters. Demographic information and representative tasks that members perform are displayed in [Table 6](#).

- I. INTRUSION DETECTION SYSTEMS MAINTENANCE IJ (STG 20, N=57)
- II. VISUAL IMAGERY MAINTENANCE CLUSTER (STG 23, N=101)
 - A. Maintenance Support Job (STG 52)
 - B. Visual Imagery Maintenance Job (STG 47)
 - C. Visual Imagery and Intrusion Detection Systems Guard Job (STG 43)
 - D. Video Production Maintenance Job (STG 44)
 - E. Broadcast Maintenance Job (STG 54)
- III. PHOTOGRAPHIC MAINTENANCE IJ (STG 32, N=13)
- IV. BASIC TELEVISION EQUIPMENT MAINTENANCE (BTVEM) INSTRUCTION IJ (STG 22, N=5)
- V. MANAGEMENT/SUPERVISION CLUSTER (STG 36, N=66)
 - A. NCOIC Intrusion Detection Systems Maintenance Job (STG 97)
 - B. Visual Imagery Maintenance Supervision Job (STG 81)
 - C. Maintenance Support Management Job (STG 66)

The military members forming these jobs and clusters account for 89% of the survey sample. The remaining 11% were performing tasks or series of tasks that did not group with any of the defined jobs. Job titles given by respondents representative of these personnel include: Plans and Programs Coordinator, Projector Setup, and Engineering Manager.

**AFSC 2E1X4, VISUAL IMAGERY AND INTRUSION DETECTION SYSTEMS
SPECIALTY JOBS
(N=271)**

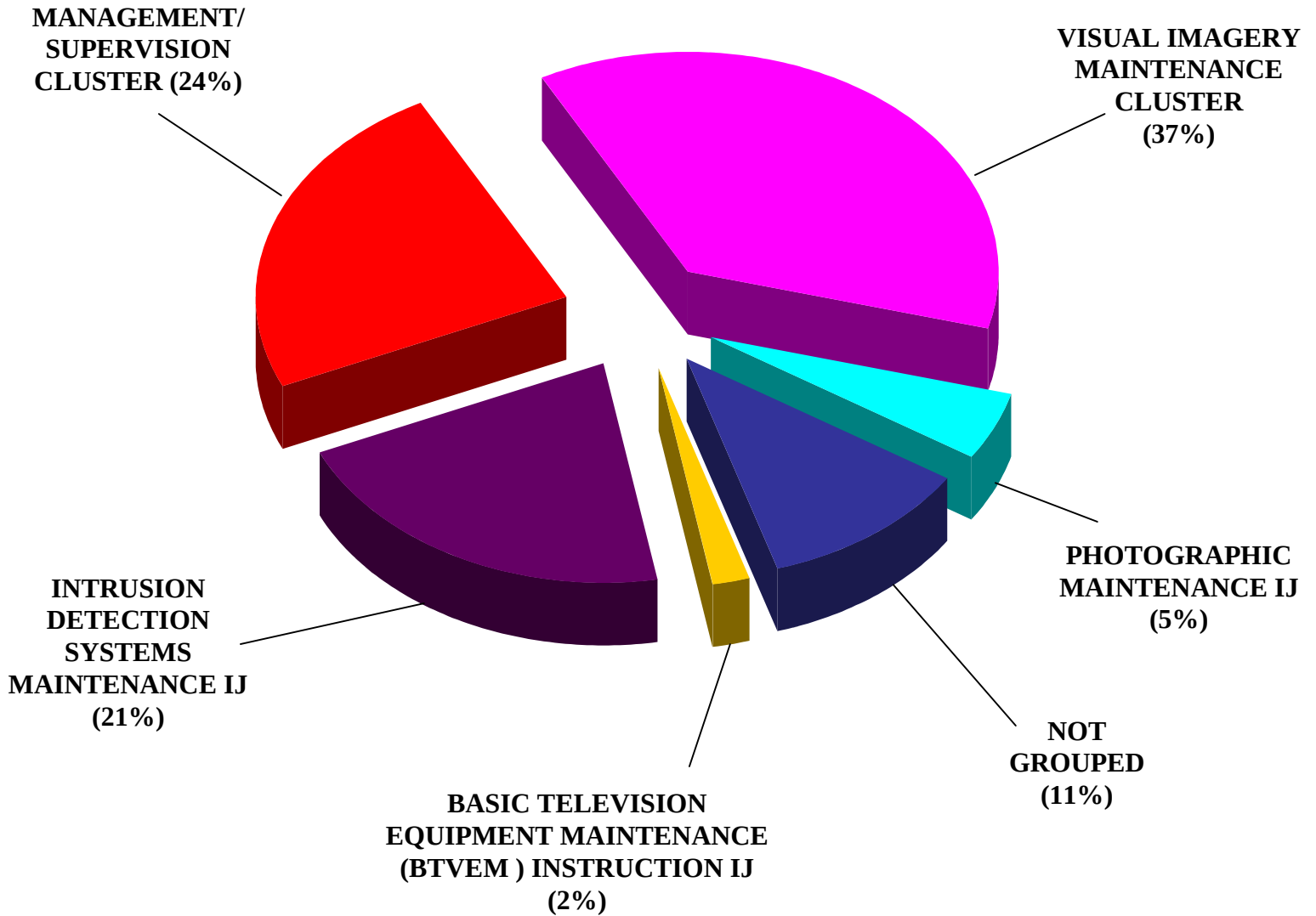


FIGURE 1

**JOBS WITHIN THE VISUAL IMAGERY MAINTENANCE CLUSTER
(N=101)**

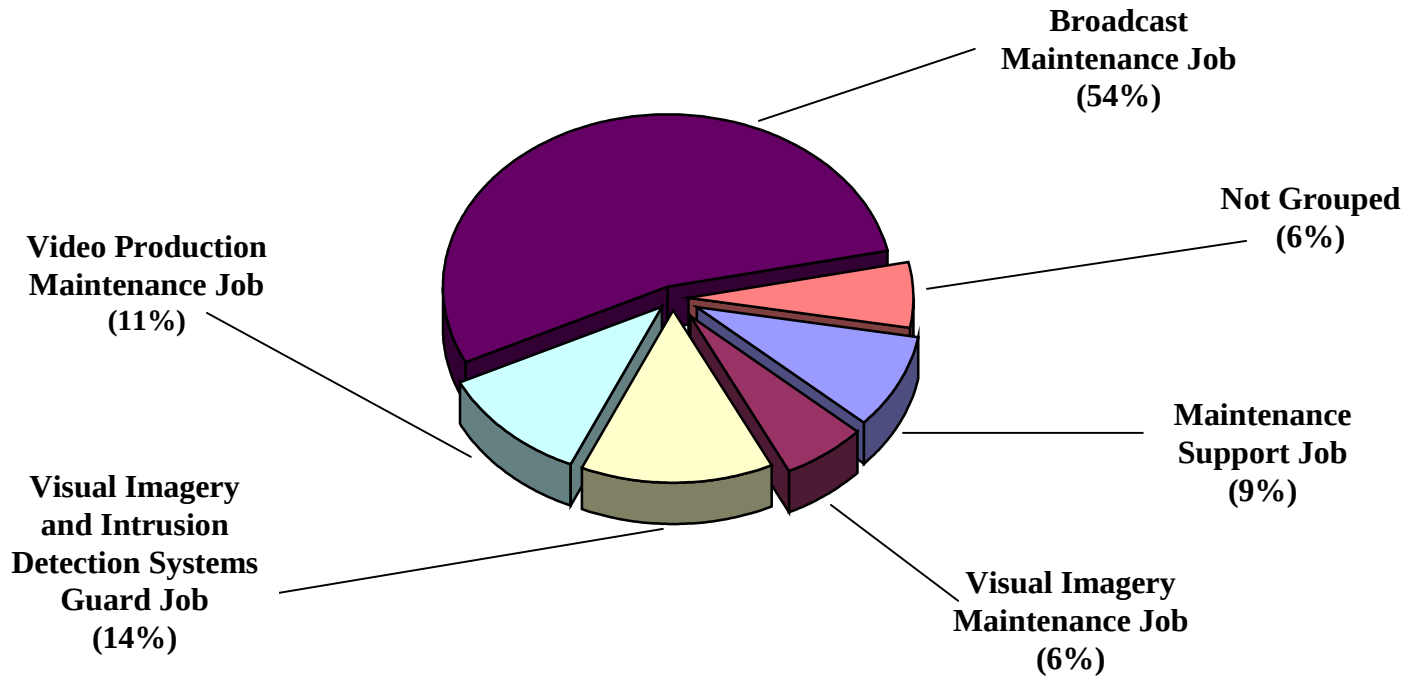


FIGURE 1A

**JOBS WITHIN THE MANAGEMENT/SUPERVISION CLUSTER
(N=66)**

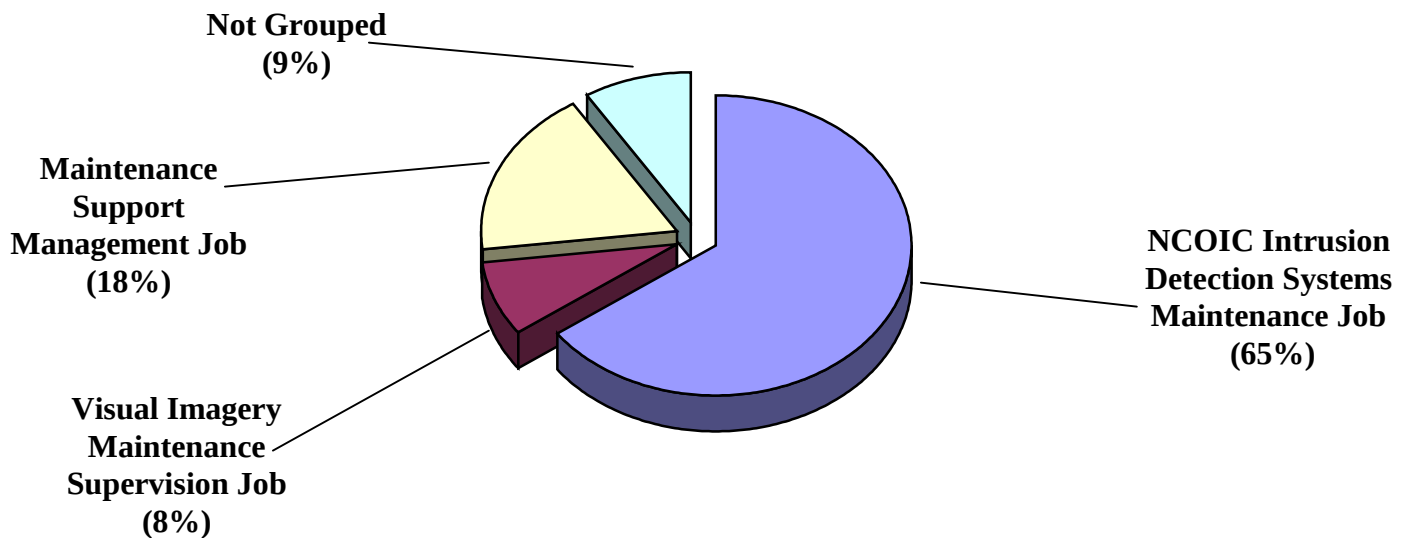


FIGURE 1B

TABLE 5

RELATIVE PERCENT TIME SPENT ON DUTIES BY SPECIALTY CLUSTERS AND JOBS

<u>DUTIES</u>	INTRUSION DETECTION SYSTEMS MAINTENANCE	VISUAL IMAGERY MAINTENANCE	VISUAL IMAGERY MAINTENANCE CLUSTER
	IJ (STG 20)	CLUSTER (STG 23)	Maintenance Support Job (STG 52)
A PERFORMING GENERAL MAINTENANCE ACTIVITIES	31	21	32
B PERFORMING INTRUSION DETECTION SYSTEMS MAINTENANCE ACTIVITIES	41	3	1
C PERFORMING MONITOR, RECEIVER, AND PROJECTION MAINTENANCE ACTIVITIES	2	6	10
D PERFORMING AUDIO SYSTEM MAINTENANCE ACTIVITIES	1	12	6
E PERFORMING VIDEO CAMERA SYSTEM MAINTENANCE ACTIVITIES	3	8	5
F PERFORMING STUDIO, PRODUCTION, AND AUXILIARY EQUIPMENT MAINTENANCE ACTIVITIES	1	21	11
G PERFORMING PHOTOGRAPHIC PROCESSING EQUIPMENT MAINTENANCE ACTIVITIES	*	*	*
H PERFORMING PHOTOGRAPHIC SUPPORT EQUIPMENT MAINTENANCE ACTIVITIES	*	1	1
I PERFORMING PRINTER SYSTEM MAINTENANCE ACTIVITIES	*	*	0
J PERFORMING RADIO FREQUENCY (RF) SYSTEM MAINTENANCE ACTIVITIES	1	5	1
K PERFORMING MICROWAVE AND SATELLITE SYSTEM MAINTENANCE ACTIVITIES	2	2	*
L PERFORMING DEPLOYABLE SHELTERIZED SYSTEMS-FILM (DSS-F) MAINTENANCE ACTIVITIES	*	*	0
M PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	4	3	3
N PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	9	8	24
O PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES	1	2	1
P PERFORMING TRAINING ACTIVITIES	3	3	2
Q PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	3	5	5

* Indicates less than 1%

Note: Columns may not add up to 100% due to rounding

TABLE 5 (CONT.)

RELATIVE PERCENT TIME SPENT ON DUTIES BY SPECIALTY CLUSTERS AND JOBS

<u>DUTIES</u>	VISUAL IMAGERY MAINTENANCE CLUSTER			
	Visual Imagery Maintenance Job (STG 47)	VIID Systems Guard Job (STG 43)	Video Production Maint Job (STG 44)	Broadcast Maintenance Job (STG 54)
A PERFORMING GENERAL MAINTENANCE ACTIVITIES	32	26	27	16
B PERFORMING INTRUSION DETECTION SYSTEMS MAINTENANCE ACTIVITIES	1	14	*	1
C PERFORMING MONITOR, RECEIVER, AND PROJECTION MAINTENANCE ACTIVITIES	11	7	5	5
D PERFORMING AUDIO SYSTEM MAINTENANCE ACTIVITIES	6	10	7	16
E PERFORMING VIDEO CAMERA SYSTEM MAINTENANCE ACTIVITIES	8	3	15	9
F PERFORMING STUDIO, PRODUCTION, AND AUXILIARY EQUIPMENT MAINTENANCE ACTIVITIES	27	3	19	28
G PERFORMING PHOTOGRAPHIC PROCESSING EQUIPMENT MAINTENANCE ACTIVITIES	0	*	*	*
H PERFORMING PHOTOGRAPHIC SUPPORT EQUIPMENT MAINTENANCE ACTIVITIES		1	1	*
I PERFORMING PRINTER SYSTEM MAINTENANCE ACTIVITIES	1	1	0	*
J PERFORMING RADIO FREQUENCY (RF) SYSTEM MAINTENANCE ACTIVITIES	*	8	5	4
K PERFORMING MICROWAVE AND SATELLITE SYSTEM MAINTENANCE ACTIVITIES	0	3	4	2
L PERFORMING DEPLOYABLE SHELTERIZED SYSTEMS-FILM (DSS-F) MAINTENANCE ACTIVITIES	0	*	*	*
M PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	4	3	2	3
N PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	5	8	9	5
O PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES	1	5	2	1
P PERFORMING TRAINING ACTIVITIES	1	3	2	4
Q PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	3	6	3	6

* Indicates less than 1%

Note: Columns may not add up to 100% due to rounding

TABLE 5 (CONT.)

RELATIVE PERCENT TIME SPENT ON DUTIES BY SPECIALTY CLUSTERS AND JOBS

<u>DUTIES</u>	PHOTOGRAPHIC MAINTENANCE	BTVM INSTRUCTION	MANAGEMENT/ SUPERVISION
	IJ (STG 32)	IJ (STG 22)	CLUSTER (STG 36)
A PERFORMING GENERAL MAINTENANCE ACTIVITIES	9	4	10
B PERFORMING INTRUSION DETECTION SYSTEMS MAINTENANCE ACTIVITIES	*	0	8
C PERFORMING MONITOR, RECEIVER, AND PROJECTION MAINTENANCE ACTIVITIES	1	11	2
D PERFORMING AUDIO SYSTEM MAINTENANCE ACTIVITIES	1	4	2
E PERFORMING VIDEO CAMERA SYSTEM MAINTENANCE ACTIVITIES	*	4	2
F PERFORMING STUDIO, PRODUCTION, AND AUXILIARY EQUIPMENT MAINTENANCE ACTIVITIES	1	0	2
G PERFORMING PHOTOGRAPHIC PROCESSING EQUIPMENT MAINTENANCE ACTIVITIES	18	0	*
H PERFORMING PHOTOGRAPHIC SUPPORT EQUIPMENT MAINTENANCE ACTIVITIES	33	0	*
I PERFORMING PRINTER SYSTEM MAINTENANCE ACTIVITIES	6	0	*
J PERFORMING RADIO FREQUENCY (RF) SYSTEM MAINTENANCE ACTIVITIES	*	6	1
K PERFORMING MICROWAVE AND SATELLITE SYSTEM MAINTENANCE ACTIVITIES	0	4	*
L PERFORMING DEPLOYABLE SHELTERIZED SYSTEMS-FILM (DSS-F) MAINTENANCE ACTIVITIES	3	0	*
M PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	6	*	7
N PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	7	3	9
O PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES	1	0	2
P PERFORMING TRAINING ACTIVITIES	5	54	14
Q PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	9	8	40

* Indicates less than 1%

Note: Columns may not add up to 100% due to rounding

TABLE 5 (CONT.)

RELATIVE PERCENT TIME SPENT ON DUTIES BY SPECIALTY CLUSTERS AND JOBS

<u>DUTIES</u>	<u>MANAGEMENT/SUPERVISION CLUSTER</u>		
	NCOIC Intrusion Detection Systems Maintenance Job (STG 97)	Visual Imagery Maintenance Supervision Job (STG 81)	Maintenance Support Management Job (STG 66)
A PERFORMING GENERAL MAINTENANCE ACTIVITIES	12	11	2
B PERFORMING INTRUSION DETECTION SYSTEMS MAINTENANCE ACTIVITIES	11	*	0
C PERFORMING MONITOR, RECEIVER, AND PROJECTION MAINTENANCE ACTIVITIES	1	4	1
D PERFORMING AUDIO SYSTEM MAINTENANCE ACTIVITIES	2	13	1
E PERFORMING VIDEO CAMERA SYSTEM MAINTENANCE ACTIVITIES	2	7	1
F PERFORMING STUDIO, PRODUCTION, AND AUXILIARY EQUIPMENT MAINTENANCE ACTIVITIES	1	14	1
G PERFORMING PHOTOGRAPHIC PROCESSING EQUIPMENT MAINTENANCE ACTIVITIES	*	0	0
H PERFORMING PHOTOGRAPHIC SUPPORT EQUIPMENT MAINTENANCE ACTIVITIES	*	*	*
I PERFORMING PRINTER SYSTEM MAINTENANCE ACTIVITIES	0	0	0
J PERFORMING RADIO FREQUENCY (RF) SYSTEM MAINTENANCE ACTIVITIES	1	2	0
K PERFORMING MICROWAVE AND SATELLITE SYSTEM MAINTENANCE ACTIVITIES	*	1	0
L PERFORMING DEPLOYABLE SHELTERIZED SYSTEMS-FILM (DSS-F) MAINTENANCE ACTIVITIES	*	*	0
M PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	7	3	10
N PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	9	6	9
O PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES	2	1	2
P PERFORMING TRAINING ACTIVITIES	13	11	15
Q PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	38	23	58

* Indicates less than 1%

Note: Columns may not add up to 100% due to rounding

TABLE 6

SELECTED BACKGROUND DATA FOR SPECIALTY JOBS

	INTRUSION DETECTION SYSTEMS MAINTENANCE IJ (STG 20)	VISUAL IMAGERY MAINTENANCE CLUSTER (STG 23)	VISUAL IMAGERY MAINTENANCE CLUSTER				
			Maintenance Support Job (STG 52)	Visual Imagery Maintenance Job (STG 47)	VIID Systems Guard Job (STG 43)	Video Production Maintenance Job (STG 44)	Broadcast Maintenance Job (STG 54)
PERCENT OF SAMPLE	21%	37%					
PERCENT ASSIGNED OVERSEAS	35%	24%					
<u>DAFSC DISTRIBUTION:</u>							
2E134	70%	21%	22%	67%	21%	27%	16%
2E154	26%	48%	44%	17%	7%	64%	64%
2E174	4%	32%	33%	17%	71%	9%	20%
<u>COMPONENT STATUS:</u>							
PERCENT IN AD	98%	82%	89%	100%	21%	100%	98%
PERCENT IN ANG	2%	18%	11%	0%	79%	0%	2%
<u>GRADE</u>							
E-2 to E-3	37%	17%	56%	50%	0%	27%	11%
E-4	53%	25%	22%	33%	43%	9%	22%
E-5	9%	25%	0%	0%	7%	55%	33%
E-6	2%	22%	22%	17%	21%	9%	25%
E-7	0%	12%	0%	0%	29%	0%	9%
E-8	0%	0%	0%	0%	0%	0%	0%
E-9	0%	0%	0%	0%	0%	0%	0%
AVG MONTHS TAFMS (AD)	43 months	106 months	48 months	61 months	109 months	86 months	121 months
PERCENT IN FIRST ENLISTMENT (AD)	80%	35%	77%	83%	14%	36%	31%
PERCENT SUPERVISING	7%	28%	11%	17%	29%	27%	29%
AVERAGE NUMBER OF TASKS PERFORMED	56	123	59	47	128	68	155
PREDOMINANT MAJCOM	ACC	AETC	ACC, AMC	AETC, ACC	ANG	AFNEWS, AMC	AETC

Note: Columns may not add to 100% due to rounding

TABLE 6 (CONT.)

SELECTED BACKGROUND DATA FOR SPECIALTY JOBS

	PHOTOGRAPHIC MAINTENANCE IJ (STG 32)	BTVEM INSTRUCTION IJ (STG 22)	MANAGEMENT/ SUPERVISION CLUSTER (STG 36)	MANAGEMENT/SUPERVISION CLUSTER		
				NCOIC Intrusion Det Systems Maintenance Job (STG 97)	Visual Imagery Maintenance Supervision Job (STG 81)	Maintenance Support Management Job (STG 66)
PERCENT OF SAMPLE	5%	2%	24%			
PERCENT ASSIGNED OVERSEAS	54%	20%	39%			
<u>DAFSC DISTRIBUTION:</u>						
2E134	23%	0%	3%	2%	0%	0%
2E154	38%	80%	45%	44%	60%	33%
2E174	38%	20%	52%	53%	40%	67%
<u>COMPONENT STATUS:</u>						
PERCENT IN AD	62%	100%	100%	100%	100%	100%
PERCENT IN ANG	38%	0%	0%	0%	0%	0%
<u>GRADE</u>						
E-2 to E-3	0%	0%	0%	0%	0%	0%
E-4	15%	0%	2%	0%	0%	0%
E-5	38%	60%	27%	26%	40%	8%
E-6	15%	40%	38%	40%	40%	42%
E-7	31%	0%	32%	35%	20%	42%
E-8	0%	0%	2%	0%	0%	8%
E-9	0%	0%	0%	0%	0%	0%
AVG MONTHS TAFMS (AD)	109 months	180 months	190 months	193 months	171 months	223 months
PERCENT IN FIRST ENLISTMENT (AD)	0%	0%	2%	0%	0%	0%
PERCENT SUPERVISING	38%	20%	91%	100%	100%	58%
AVERAGE NUMBER OF TASKS PERFORMED	114	25	90	102	135	40
PREDOMINANT MAJCOM	USEUC, ANG	AFOFA	ACC	ACC	AETC	AFNEWS, AETC

Note: Columns may not add up to 100% due to rounding

Comparison of Current Specialty Jobs to Previous Survey

For the most part, specialty jobs found in the present analysis are comparable to specialty jobs from the previous study. However, some differences exist. [Table A6](#) displays the clusters and jobs identified in this study compared to the previous study conducted in 2000.

- Intrusion Detection Systems Maintenance Cluster containing two jobs found in the 2000 survey is now an Intrusion Detection Systems Maintenance IJ
- The 2000 survey's Multimedia Equipment Maintenance Cluster with four jobs is now identified as the Visual Imagery Maintenance Cluster with five jobs. The four jobs included in the previous survey are all represented in the current study, with only slight job title changes. For example, the tasks performed by the members in the previous Monitors and Receivers Job are the same tasks performed by the current Maintenance Support Job.
- The Visual Imagery and Intrusion Detection Systems Guard Job found in the current survey under the Visual Imagery Maintenance Cluster was not found in the 2000 survey's Multimedia Equipment Maintenance Cluster. These 14 ANG members perform a high average number of tasks (128) compared to the other jobs within the cluster. Duty areas are spread out and associated tasks are likewise evenly dispersed.
- Two current specialty jobs (Photographic Maintenance IJ and Basic Television Equipment Maintenance (BTVEM) Instruction IJ) remain very similar to their 2000 counterparts (Photo Imagery Equipment Maintenance Job and Instructor Job). They are generally performing the same types of tasks in the same duty areas. The slight job title changes are the only mentionable differences.
- The Controller Job in the previous survey was not found in this study. The tasks previously associated with this job are embedded in and not distinguishable from the tasks being performed within the current Maintenance Support Job found in the Visual Imagery Maintenance Cluster .
- Overall, the specialty jobs found in the current survey are quite comparable to the previous survey.

SKILL AND EXPERIENCE ANALYSIS

An analysis of DAFSC groups in conjunction with the analysis of the career ladder structure is an important part of each OSR. This information may be used to evaluate how well career ladder documents, such as AFMAN 36-2108, *Enlisted Classification*, reflect what career ladder personnel are actually doing in the field.

Total Sample

Jobs

[Table A7](#) – Distribution of skill-level members across career ladder clusters and independent jobs:

- Over half of all 3-skill-level members are included in the Intrusion Detection Systems Maintenance IJ (55%), which is much higher than other skill levels. The next highest concentration of 3-skill-level members is the Visual Imagery Maintenance Cluster (29%). This cluster and the IJ account for 84% of all DAFSC 2E134s. Less than 10% of 3-skill-level members are included in the remaining cluster and IJs.
- Five-skill-level members are concentrated in two main areas: the Visual Imagery Maintenance Cluster (42%) and the Management/Supervision Cluster (26%).
- The 7-skill-level members are much more concentrated within two functional areas: the Management/Supervision Cluster (41%) and the Visual Imagery Maintenance Cluster (39%). These two functional areas account for 80% of all DAFSC 2E174 members.

Duties

[Table A8](#) – Time spent on duties by members of skill-level groups:

- No duty area within the JI is evenly represented by all skill-level groups; however, Duty A (Performing General Maintenance Activities) comes the closest. At least 16% and no more than 27% of all skill-level members perform general maintenance activities. All other duty areas have much wider ranges of percent members performing.
- Over half of all 3-skill-level members' time is concentrated in Duty A (Performing General Maintenance Activities) (27%) and Duty B (Performing Intrusion Detection Systems Maintenance Activities) (26%). The remaining 3-skill-level members' relative time is dispersed throughout 15 duty areas, none comprising more than 8%.

- Five-skill-level members spend the largest percentage of time performing general maintenance activities (20%). An additional 24% of their job time is spent in Duty F (Performing Studio, Production, and Auxiliary Equipment Maintenance Activities) and Duty Q (Performing Management and Supervisory Activities) (both 12%). Nine percent of DAFSC 2E154 members spend time in Duty B (Performing Intrusion Detection System Maintenance Activities).
- Seven-skill-level members spend the highest concentration of their time (27%) in Duty Q (Performing Management and Supervisory Activities). The next highest amount of their time is spent in Duties A (Performing General Maintenance Activities) and N (Performing General Supply and Equipment Activities) (16% and 10%, respectively).

Active Duty

Duties

[Table A9](#) – Time spent on duties by AD members of skill-level groups:

- AD 3-skill-level members spend more time performing general maintenance activities and intrusion detection systems maintenance activities (Duties A and B, respectively) (both 27%) than 5- and 7-skill-level members. These two duty areas also make up the largest concentration of time spent. The remainder of time spent on duties by AD 3-skill-level members is evenly spread over the remaining 15 duty areas.
- AD 5-skill-level members spend their time concentrated in three duty areas: Duty A (Performing General Maintenance Activities), Duty F (Performing Studio, Production, and Auxiliary Equipment Maintenance Activities), and Duty Q (Performing Management and Supervisory Activities) (20%, 12%, and 12%, respectively).
- AD 7-skill-level members spend significantly more of their job time performing management and supervisory activities (Duty Q, 36%) than DAFSC 2E134 and 2E154 members. They also perform general maintenance activities (Duty A, 12%) and training activities (Duty P, 11%).

Tasks

[Table A10](#) – Tasks performed by AD DAFSC 2E134 members:

- Top tasks performed by the highest percentages of 3-skill-level members include general maintenance activities as well as intrusion detection systems maintenance activities. The intrusion detection systems maintenance activities include tasks associated with preventive maintenance as well as troubleshooting and repairing of different equipment.

[Table A11](#) – Tasks performed by AD DAFSC 2E154 members:

- Tasks being performed by the highest percentages of 5-skill-level members are somewhat similar to the tasks performed by the 3-skill-level members; however, they also include tasks associated with Duty C (Performing Monitor, Receiver, and Projection Maintenance Activities). On average, 5-skill-level AD members perform 27 more tasks than the 3-skill-level members. These tasks are mainly found in Duty N (Performing General Supply and Equipment Activities) and Duty P (Performing Training Activities).

[Table A12](#) – Tasks performed by AD DAFSC 2E174 members:

- On average, 7-skill-level members are performing the same number of tasks as 5-skill-level members. However, top tasks performed by AD DAFSC 2E1X4 personnel are concentrated in three areas: Duty P (Performing Training Activities), Duty Q (Performing Management and Supervisory Activities), and Duty N (Performing General Supply and Equipment Activities).

Air National Guard

The ANG sample included only one respondent in both the DAFSC 2E134 and 2E154 groups, therefore the analysis below only reports on the 24 DAFSC 2E174 members.

Duties

[Table A13](#) – Time spent on duties by ANG members of skill-level groups:

- The 7-skill-level guard members perform a job very broad in scope with their job time equally spread out over Duties B (Performing Intrusion Detection Systems Maintenance Activities) through Q (Performing Management and Supervisory Activities).
- ANG 7-skill-level members only spend 5% of their job time performing management and supervisory activities (Duty M), in contrast to AD 7-skill-level members. The highest percent of their time spent (26%) is in Duty A (Performing General Maintenance Activities), similar to AD 3-skill-level members—illustrating most ANG personnel continue to perform technical tasks.

Tasks

[Table A14](#) – Tasks performed by ANG DAFSC 2E174 members:

- In contrast to the AD 7-skill-level members whose time is concentrated in management and supervisory-related tasks, ANG 7-skill-level members perform a

very heterogeneous job, spanning across several duty areas. Top tasks performed by 7-skill-level members are operational and performance-based tasks rather than management and supervisory tasks and include such tasks as “fabricate cables, other than fiber-optic cables”, “perform soldering techniques”, and “perform operational checks on monitors or receivers”. However, ANG 7-skill-level members perform an average of 99 tasks, similar to their AD DAFSC 2E174 counterparts, performing an average of 92 tasks.

TRAINING ANALYSIS

Occupational survey data are a source of information that can assist in the development or evaluation of training programs for both entry-level and advanced members. In particular, the factors used to evaluate entry-level member training include the jobs that are being performed by first-enlistment personnel (1-48 months’ TAFMS), the overall distribution of first-enlistment personnel across career ladder jobs, the percent of first-enlistment members who perform specific tasks, and ratings of relative training emphasis (TE) and task difficulty (TD). (TE and TD ratings are discussed in the Task Factor Administration section of this OSR.)

First-Enlistment Personnel (1–48 months’ TAFMS)

N=94

Jobs

[Figure 2](#) – Distribution of first-enlistment personnel across specialty clusters and jobs:

- Almost half of all the first-enlistment personnel are included in the Intrusion Detection Systems Maintenance IJ (49%), as compared to the percentage in the total sample (21%, as shown in [Figure 1](#)). The same percentage of first-enlistment personnel are within the Visual Imagery Maintenance Cluster (37%) as compared to the percentage in the total sample (37%, as shown in [Figure 1](#)). No first-enlistment personnel are included in the Photographic Maintenance IJ and the BTVEM Instruction IJ.

Duties

[Table A15](#) – Relative time spent on duties by first-enlistment personnel.

- First-enlistment members are performing duties very similar to DAFSC 2E134 members with the highest concentration (28%) in Duty A (Performing General Maintenance Activities). Forty-one percent of these first-enlistment groups’ job time is distributed across three duty areas: Duties B (Performing Intrusion Detection

System Maintenance Activities); F (Performing Studio, Production, and Auxiliary Equipment Maintenance Activities); and N (Performing General Supply and Equipment Activities) (22%, 10%, and 9%, respectively).

Tasks

[Table A16](#) – Representative tasks performed by first-enlistment personnel.

- Top tasks performed by first-enlistment members include: “perform soldering techniques”, “perform operational checks on cables, other than fiber-optic cables” and “remove or replace batteries.”

Equipment

[Table A17](#) – Equipment or systems used, operated, or maintained by first-enlistment personnel.

- The types of equipment typically used, operated, or maintained by over half of first-enlistment members include digital multimeters (83%), oscilloscopes (80%), waveform monitors (63%), video cameras (61%), television (TV) monitors (57%), video monitors (52%), digital voltmeters (52%), power supplies (51%), and signal generators (51%). Other equipment and systems include video test signal generators (49%), interior intrusion detection systems equipment (48%), closed-circuit televisions (46%), videotape recorders (VTRs) (44%), and other editing equipment.

**AFSC 2E1X4 FIRST-ENLISTMENT
PERSONNEL ACROSS SPECIALTY JOBS
(N=94)**

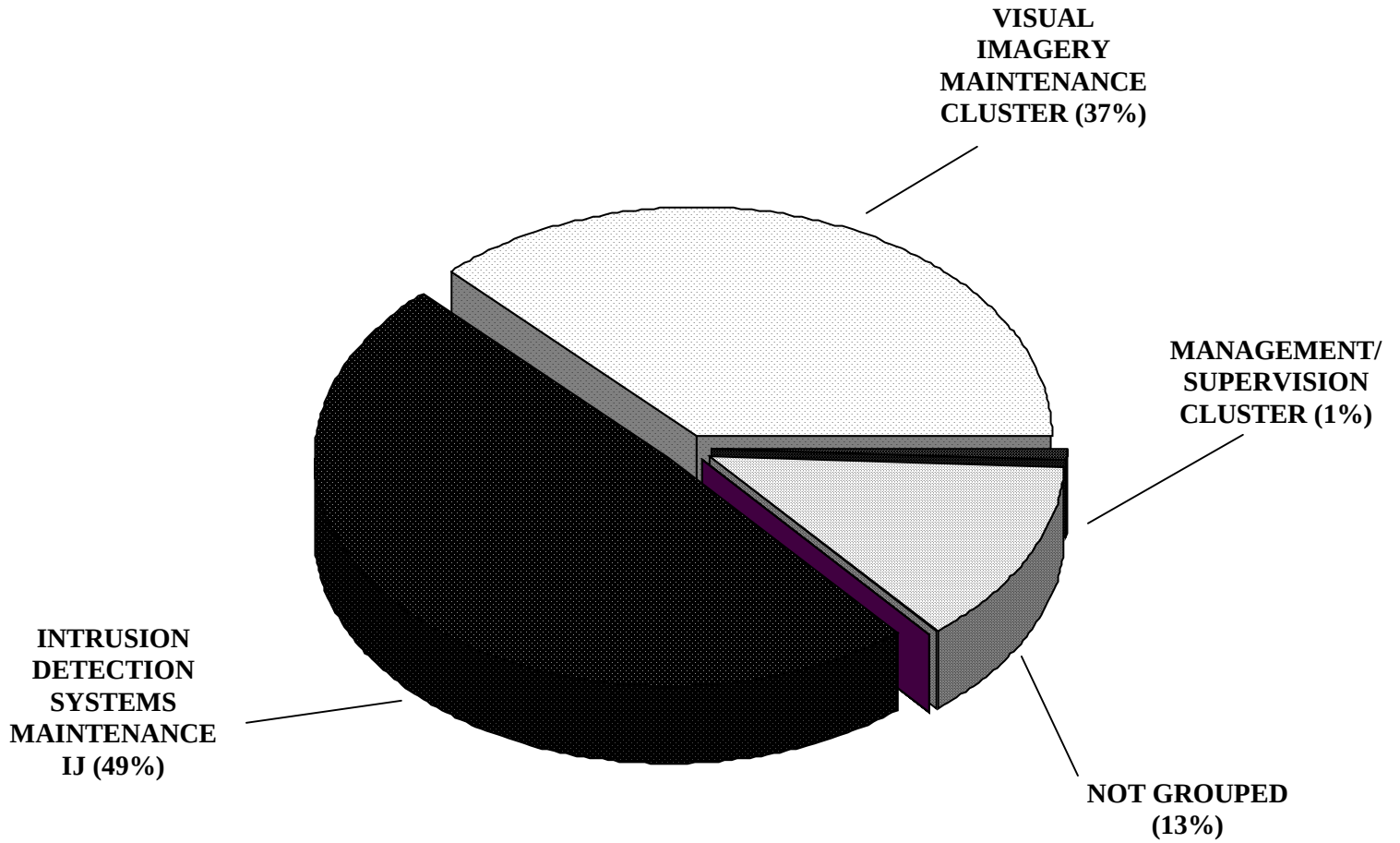


FIGURE 2

Task Factor Surveys

Job descriptions alone do not provide sufficient data for making decisions about career ladder documents or training programs. Task factor information, along with data from the course training standard (CTS) and plan of instruction (POI), is needed for a complete analysis of the career ladder. To obtain the needed task factor data, selected AFSC 2E1X4 members (generally E-6 or E-7 craftsmen) completed either a training emphasis (TE) or task difficulty (TD) survey. These training documents (CTS and POI) were reviewed by matching survey tasks to CTS and POI elements, then examining task performance, TE data, and TD data for the matched tasks.

Task Factor Administration

TE and TD data can help training development personnel decide which tasks to emphasize for entry-level, structured training (resident technical schools, field training detachments, mobile training teams, formal OJT, or any other organized training method). For example, tasks receiving high TE and TD ratings generally warrant resident training if they are also performed by a moderate-to-high percentage of first-enlistment members. Tasks receiving high TE and/or TD ratings but being performed by relatively low percentages of first-enlistment members may be more appropriately planned for structured OJT programs within the career ladder. Low TE and/or TD ratings may highlight tasks best omitted from training for new personnel. These task factors are, of course, not the only ones to weigh in making training decisions; the percentages of personnel performing the tasks, command concerns, the criticality of the tasks, and other important factors must also be carefully considered.

Training Emphasis (TE) — degree of emphasis that should be placed on each task for structured training of entry-level members:

- Nineteen AFSC 2E1X4 senior noncommissioned officers (NCOs) rated tasks in the inventory on a scale from 0 (no training required) to 9 (extremely high training emphasis)
- Average TE rating was 2.01 with a standard deviation of 1.46
- If a task has a TE rating at least one standard deviation above the mean, that is, of at least 3.47, it is probably important to provide new personnel with formal training on that task

[Table A18](#) – Tasks with highest TE ratings:

- Most tasks with high TE ratings are from Duty A (Performing General Maintenance Activities) and Duty E (Performing Video Camera System Maintenance Activities) and involve performing operational checks and preventive maintenance inspections on equipment.

Task Difficulty (TD) — amount of time needed to learn to perform that task satisfactorily:

- Twenty-five AFSC 2E1X4 senior NCOs rated the difficulty of tasks in the inventory using a scale from 1 (extremely low difficulty) to 9 (extremely high difficulty)
- TD ratings are normally adjusted so that tasks of average difficulty have a value of 5.00 and a standard deviation of 1.00
- Any task with a difficulty of 6.00 or greater is therefore considered difficult to learn

[Table A19](#) – Tasks with highest TD ratings:

- This table lists percent members performing these tasks by groups of 1-48 months' TAFMS, as well as members of the 3-, 5-, and 7-skill-level groups
- Tasks within Duty F (Performing Studio, Production, and Auxiliary Equipment Maintenance Activities) received the highest TD ratings. These tasks included aligning and troubleshooting or repairing particular types of equipment and systems.

Automated Training Indicators (ATI)

To assist training development personnel, the AFOMS 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. ATIs correspond to training decisions listed and defined in the Training Decision Logic Table found in Attachment 2, AETCI 36-3601. ATIs allow training developers to quickly focus attention on those basic tasks, which are most likely to qualify for resident training.

Various lists of tasks, accompanied by TE and TD ratings, and where appropriate ATI information, are contained in the training extract package and should be reviewed in detail by technical school personnel. (For a more detailed explanation of TE and TD ratings, see [Task Factor Administration](#) above.)

Course Training Standard (CTS) Analysis

Two technical school personnel from the 338th Training Squadron (338 TRS), Keesler AFB MS, and two technical school personnel from the standards and evaluation section of the Defense Information School (DINFOS) matched JI tasks to CTS items. Per AETCI 36-2601, dated 14 July 1999, CTS elements that are performed by at least 20% of members in appropriate skill-level groups [particularly first-enlistment (1-48 months' TAFMS) members or 3-skill-level members] should be included in the CTS. Of course, these are not the only criteria for inclusion in the CTS, and other rational considerations may argue against inclusion. As stated above, tasks

not referenced to the CTS, with at least 20% of any selected criterion group performing, should be reviewed by training personnel for possible addition to the CTS.

[Table A20](#) – Examples of CTS elements matched to tasks being performed by less than 20% of members:

- The task “align radio or TV modulators or demodulators” matched to the CTS element “Identify the basic fundamentals of modulators (TV/Radio) (II.7.5.4.)” is only being performed by 3% of first-enlistment personnel and 1% of 3-skill-level members.
- The task “align fiber-optic systems” matched to the CTS element “identify basic principles of fiber optic systems” (I.4.3.) is only being performed by 15% of first-enlistment personnel and 14% of 3-skill-level members.
- The examples mentioned above, along with approximately 15 other discrepancies (noted in the AD training extract included with this report), should be considered for possible CTS revision

[Table A21](#) – Tasks not referenced to CTS elements with 20% or more members performing:

- Less than 15 tasks not referenced to a CTS element with 20% or more members performing existed in the analysis. These tasks mainly involved performing PMIs on numerous types of equipment or systems. For example, the task “perform PMIs on power supplies, other than UPSs” (A0033) is performed by 33% of first-enlistment personnel and 28% of all 3-skill-level members. This task, along with 14 others, should be reviewed for possible inclusion in the CTS.

Plan of Instruction (POI) Analysis

In addition to the CTS, the POI for a course may also have unsupported objectives (included in the course but performed by few first-term airmen.) Personnel from the 338 TRS, Keesler AFB MS and personnel from the standards and evaluation section of the Defense Information School (DINFOS, Ft Meade MD) also matched JI tasks to related training objectives in the POIs for the entry-level courses. POI blocks, units of instruction, and learning objectives were then compared to the standard set forth in AETCI 36-2601. These documents indicate that tasks trained in the course but not performed by at least 30% of first-enlistment members should be considered for elimination from the course, unless other rational considerations argue for inclusion. This is especially so if TE ratings for the task are not particularly high.

[Table A22](#) – Examples of tasks matched to POI (Keesler) objectives performed by less than 30% of job incumbents in their first enlistment:

- Only 7 discrepancies were found when analyzing tasks matched to learning objectives where less than 30% of first-enlistment personnel were performing. An example

includes learning objective IV.1.a. (Identify Security Monitoring and Reporting Terminal (SMART) system component functions), where less than 30% of both first-enlistment and 3-skill-level members were found performing the two tasks matched to the learning objective. Only 9% of first-enlistment personnel and 6% of 3-skill-level members perform the task “align communications encryption devices” (B0054) and only 9% of first-enlistment personnel and 7% of 3-skill-level members perform the task “troubleshoot or repair communications encryption devices”(B0088).

- This POI objective, along with six other POI objectives, should be reviewed for possible revision

No tasks performed by 30% or more members but not referenced to any POI (Keesler) objective exist.

[Table A23](#) – Examples of tasks matched to POI (Ft Meade) objectives performed by less than 30% of job incumbents in their first enlistment:

Many discrepancies existed when analyzing the Ft Meade BTVEM POI. Over half of the learning objectives were matched to tasks being performed by less than 30% of first-enlistment personnel. These unsupported items may be explained because the course is designed to teach Army as well as Air Force personnel. The course POI is structured to provide adequate training for both service branches.

- For example, the tasks “align video camera circuits” (E0168), “align pulse or video DAS” (F0183), and “align timing and phasing of studio systems, such as video switchers, character generators, or still store generators” (F0189) are matched to learning objective I.3.1. “Basic Principles of Television/Radio, Analog video signal”, yet less than 30% of first-enlistment personnel and 3-skill-level members are performing these tasks. This should be reviewed for POI revision.

[Table A24](#) – Tasks not referenced to POI (Ft Meade) objectives with 30% or more members performing:

- Two tasks with 30% or more members performing were not referenced to a POI element. The task “adjust camera body electronic or mechanical components” (A0001) is performed by over 40% of first-enlistment and 3-skill-level personnel. This task, along with one other, “perform PMIs on video camera systems” (E0174) is performed by over 30% of first-enlistment and 3-skill-level personnel and should be considered for possible inclusion in the POI.

ANALYSIS OF MAJCOMS

Task and background data for personnel of the 11 AD MAJCOMs with the largest AFSC 2E1X4 populations as well as ANG members were compared to determine whether job content varied as a function of command assignment and/or component.

For the most part, the work performed across all 11 AD commands and the ANG was similar, with many tasks performed in common. The largest percentage of relative job time across all commands is committed to technical tasks covering general maintenance activities (see [Table A25](#)). However, some differences exist among MAJCOMs. The most notable differences are associated with Duty B (Performing Intrusion Detection System Maintenance Activities). ACC, USAFE, and AFSPC spend 20% to 30% of their time performing tasks in Duty B, whereas all other MAJCOMs spend only 15% or less of their job time.

Another difference exists in Duty F (Performing Studio, Production, And Auxiliary Equipment Maintenance Activities). AETC members spend 23% of their time performing tasks in this duty area; all other MAJCOM members spend 16% or less time in this duty area.

The five members in USEUC spend 34% of their time performing tasks associated with Duty H (Performing Photographic Support Equipment Maintenance Activities). All other MAJCOM members spend 7% or less of their job time in this duty area.

JOB SATISFACTION ANALYSIS

An examination of job satisfaction indicators can give career ladder managers a better understanding of factors that may affect the job performance of career ladder airmen. The survey included attitude questions covering job interest, perceived utilization of talents and training, sense of accomplishment from work, and reenlistment intentions.

Job Satisfaction

[Table A26](#) – displays job satisfaction data by job groups identified in **AFSC 2E1X4 SPECIALTY JOBS** section of this report:

- AFSC 2E1X4 members’ “perceived use of training” ranks lower than other job satisfaction indicators. For example, 46% of the Photographic Maintenance IJ members report their “perceived use of training” as “none to very little.”
- Members in the Photographic Maintenance IJ report relatively low levels of job satisfaction as compared to other identified job groups across all five job satisfaction indicators

- In the job satisfaction indicators “expressed job interest” and “perceived use of talents”, the majority of members across all clusters and independent jobs reported positive responses (with the exception of the Photographic Maintenance IJ).
- Members in the BTVEM Instruction IJ had the highest job satisfaction across all indices as compared to other IJs and clusters.
- Across all clusters and IJs, lower rates of reenlistment intentions exist (60% or less responding “yes or probably yes”).

[Table A27](#) displays comparative job satisfaction data between the current AFSC 2E1X4 OSR data and members from similar AFSCs surveyed in the previous 12 months. The results from the comparison data are summarized below:

- Overall, job satisfaction ratings for the first- and second-enlistment AFSC 2E1X4 members are lower compared to the other 2E1XX AFSCs. In particular, AFSC 2E1X4 second-enlistment members’ “perceived use of training” rates the largest difference, with 45% reporting “none to very little”, as compared to only 29% reporting “none to very little” in the second-enlistment comparative sample.
- Career airmen in both the AFSC 2E1X4 sample and comparative sample report similar job satisfaction rates, with only slight percentile differences
- All five job satisfaction indicators for AFSC 2E1X4 members have generally lower ratings than for other 2E1XX AFSCs

[Table A28](#) displays job satisfaction data for the AD and ANG members. The results for the two components are summarized below:

- ANG members indicated higher job satisfaction ratings across all five job satisfaction indicators than did AD members
- AD members report a much lower expressed job interest and a slightly lower sense of accomplishment from their job than ANG personnel

[Table A29](#) compares job satisfaction data for the current AFSC 2E1X4 OSR data and the 2000 AFSC 2E1X4 survey. The results of the comparison are summarized below:

- Job satisfaction ratings for the first-enlistment and career airmen AFSC 2E1X4 members in the current study are relatively similar compared to the AFSC 2E1X4 members in the previous study
- Across all job satisfaction indicators, second-enlistment personnel in the current study report significantly lower job satisfaction ratings than the previous study

- Although data for the 2000 survey for “perceived use of talents” and “perceived use of training” could not be broken out from “excellent to perfectly” and “fairly well to very well”, the percentages of responses to these job satisfaction factors are still positive across both the current and previous TAFMS groups

RETENTION DIMENSIONS

JIs also routinely collect information about factors that affect reenlistment and separation decisions. That is, respondents who say that they are likely to reenlist at the end of their present term (and those not eligible for retirement) are asked to indicate whether any of 31 different factors will have an effect on their intended decision and, if so, the degree to which each factor may influence their decision to reenlist. Respondents who indicate that they are likely to separate at the end of their present term (and those not eligible for retirement) are asked to indicate whether any of 31 different factors will have an effect on their intended decision and, if so, the degree to which each factor may influence their decision to separate. The degree is indicated on a 3-point scale ranging from “slight influence” to “strong influence.”

Reenlistment

[Table A30](#) – Lists the 31 factors in the order they appeared in the survey. The percent selecting each factor and the average rating for each factor by TAFMS group based on how much each factor may influence their decision to reenlist are also shown:

- Top five reasons members may choose to reenlist based on the highest percentages selecting each factor are listed below [Table A30](#)
 - Top reasons for reenlistment were almost identical for all three TAFMS groups
 - “Job security”, “military-related education and training opportunities”, and “medical/dental care for AD member” appeared for each of the three TAFMS groups as top reasons for reenlisting
 - First-enlistment personnel reported “off-duty education or training opportunities” as a top reason for reenlisting
 - Second-enlistment and career airmen reported “military lifestyle” as a top reason for reenlisting

Separation

[Table A31](#) – Displays the percentage of the members for each TAFMS group indicating that their plans to separate may be influenced by each factor as well as the average ratings by TAFMS

group for the 31 factors based on the influence each factor may have on the respondents' decisions to separate:

- Top five reasons members in each TAFMS group may choose to separate based on the highest percentages selecting each factor are listed below [Table A31](#)
- Three common reasons for all TAFMS groups intending to separate include: “military lifestyle”, “pay and allowances”, and “civilian job opportunities”
- First-enlistment personnel also reported “esprit de corps/morale” and “recognition of efforts” as top reasons for separation
- Second-enlistment personnel reported “location of present assignment” and “bonus or special pay” as top reasons for separation
- Career airmen reported “number/duration of TDYs or deployments” and “promotion opportunities” as two of their top reasons for separation

WRITE-IN COMMENTS

When there are serious problems in a career ladder, survey respondents are usually quite free with write-in comments to complain about perceived problems in the field. A total of approximately 205 comments were received from survey respondents. Seventy-six percent of the survey sample used the write-in feature to convey some type of information, including information about themselves and their jobs.

Of the 205 write-in comments: 40% provided information about their job title or provided explanations of work performed and equipment used; 30% provided miscellaneous comments (ranging from not enough training, to training not utilized); 10% of the comments provided clarification on functional area; 10% provided additional tasks performed; the remaining percentages were spread across various topics.

One trend existed when analyzing the write-in comments – training issues. Thirty percent of respondents made comments involving CDCs and training issues. Many conveyed feelings that CDCs were very difficult to complete and pass due to the specialization of Visual Imagery and Intrusion Detection Systems (VIIDS) jobs after technical school. Other statements concerned training not being adequate due to the wide variety of specialized jobs existing in the DAFSC.

Some examples of specific relevant comments include the suggestions, “please look at video teleconferencing....there are hundreds of systems around the DoD used at the highest level, most often there is no trained individual to operate or maintain”, “portions of VIIDS maintenance personnel never see all three aspects of the 2E1X4 career field”, and “...recommend that 2E1X4 personnel (should) not only receive training on imagery equipment but also imagery techniques so they can more effectively interface with 3V0X2s.”

These write-in comments may support the lower job satisfaction ratings in AFSC 2E1X4, especially the low rates of “perceived use of training” as mentioned in the **JOB SATISFACTION ANALYSIS** section of this report.

APPENDIX

TABLES A1 – A31 ARE REFERENCED WITHIN THE BODY OF THE OSR

TABLE A1

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN THE
INTRUSION DETECTION SYSTEMS MAINTENANCE IJ
(N=57)

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 56	PERCENT MEMBERS PERFORMING
A0020	Perform soldering techniques	93
A0036	Remove or replace batteries	91
A0018	Perform corrosion control procedures	89
A0021	Perform operational checks on batteries	89
A0022	Perform operational checks on cables, other than fiber-optic cables	88
A0011	Enter data into maintenance management systems, such as Core Automated Maintenance Systems (CAMS)	84
A0019	Perform equipment grounding procedures	84
B0078	Perform PMIs on interior IR sensors	82
A0029	Perform preventive maintenance inspections (PMIs) on cameras	82
B0079	Perform PMIs on interior magnetic sensors	81
B0096	Troubleshoot or repair interior magnetic sensors	81
B0080	Perform PMIs on interior microwave sensors	79
B0097	Troubleshoot or repair interior microwave sensors	79
B0095	Troubleshoot or repair interior IR sensors	79
B0062	Align interior magnetic sensors	77
A0040	Troubleshoot or repair cables, other than fiber-optic cables	75
B0092	Troubleshoot or repair exterior fence sensors	74
B0063	Align interior microwave sensors	74
B0075	Perform PMIs on exterior fence sensors	72
B0061	Align interior IR sensors	72
A0034	Perform PMIs on UPSs	70
A0028	Perform operational checks on UPSs	70
N0411	Inventory equipment, tools, parts, or supplies	65
B0058	Align exterior fence sensors	63
B0084	Perform PMIs on video surveillance control equipment	56
B0101	Troubleshoot or repair video surveillance control equipment	56
B0072	Perform PMIs on computer-based annunciators	54
B0076	Perform PMIs on exterior IR sensors	54
B0060	Align exterior microwave sensors	54
B0093	Troubleshoot or repair exterior IR sensors	53
B0094	Troubleshoot or repair exterior microwave sensors	51
P0451	Conduct on-the-job training (OJT)	51
N0408	Evaluate serviceability of equipment, tools, parts, or supplies	51
B0077	Perform PMIs on exterior microwave sensors	49

TABLE A2

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN THE
VISUAL IMAGERY MAINTENANCE CLUSTER
(N=101)

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 123	PERCENT MEMBERS PERFORMING
A0022	Perform operational checks on cables, other than fiber-optic cables	97
A0020	Perform soldering techniques	96
A0012	Fabricate cables, other than fiber-optic cables	93
A0040	Troubleshoot or repair cables, other than fiber-optic cables	92
C0110	Perform operational checks on monitors or receivers	90
A0036	Remove or replace batteries	83
N0411	Inventory equipment, tools, parts, or supplies	81
C0111	Perform PMIs on monitors or receivers	81
A0019	Perform equipment grounding procedures	78
E0172	Perform operational checks on video camera systems	76
A0029	Perform preventive maintenance inspections (PMIs) on cameras	75
E0167	Adjust video camera operating controls, such as iris or setup controls	75
F0214	Perform PMIs on VTRs	73
N0408	Evaluate serviceability of equipment, tools, parts, or supplies	73
A0018	Perform corrosion control procedures	73
E0170	Perform operational checks on camera recording units	73
D0141	Perform operational checks on CD players	72
D0132	Perform operational checks on audio amplifiers	72
F0194	Operate video test signal generators	71
D0144	Perform operational checks on microphones	71
E0175	Troubleshoot or repair camera recording units	70
E0169	Align video camera lens backfocus	70
D0121	Align audio distribution amplifiers (DAs)	70
E0174	Perform PMIs on video camera systems	69
E0179	Troubleshoot or repair video camera systems	69
F0191	Align VTR mechanical systems	69
A0041	Troubleshoot or repair camera body electronic or mechanical components	68
D0138	Perform operational checks on audio speaker systems	68
A0014	Install application software	67
D0133	Perform operational checks on audio DAs	67
N0417	Research information to determine new equipment capabilities	66
F0190	Align videotape recorder (VTR) circuits	66
A0021	Perform operational checks on batteries	66
D0136	Perform operational checks on audio mixers, such as consoles or microphone mixers	66

TABLE A2a

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN THE
MAINTENANCE SUPPORT JOB
(N=9)

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 58	PERCENT MEMBERS PERFORMING
A0040	Troubleshoot or repair cables, other than fiber-optic cables	100
A0020	Perform soldering techniques	100
N0408	Evaluate serviceability of equipment, tools, parts, or supplies	100
N0411	Inventory equipment, tools, parts, or supplies	100
C0110	Perform operational checks on monitors or receivers	100
A0014	Install application software	100
A0012	Fabricate cables, other than fiber-optic cables	89
A0022	Perform operational checks on cables, other than fiber-optic cables	89
A0036	Remove or replace batteries	89
C0111	Perform PMIs on monitors or receivers	89
N0410	Initiate requisitions for equipment, tools, parts, or supplies	78
N0416	Pick up, deliver, or store equipment, tools, parts, or supplies	78
C0112	Perform PMIs on video projection systems	78
A0029	Perform preventive maintenance inspections (PMIs) on cameras	78
A0021	Perform operational checks on batteries	78
A0041	Troubleshoot or repair camera body electronic or mechanical components	78
A0001	Adjust camera body electronic or mechanical components	78
N0417	Research information to determine new equipment capabilities	67
N0406	Coordinate maintenance of equipment with appropriate agencies	67
N0412	Issue or log turn-ins of equipment, tools, parts, or supplies	67
N0409	Identify and report equipment or supply problems	67
A0015	Install operating system software	67
N0407	Develop equipment checklists	56
N0413	Maintain documentation on items requiring periodic inspections or calibrations	56
A0018	Perform corrosion control procedures	56
N0415	Pack and crate equipment for shipment, other than for mobility or contingency operations	44
Q0495	Evaluate maintenance or utilization of equipment, tools, parts, supplies, or workspace	44
C0119	Troubleshoot or repair video projection systems	44
F0236	Troubleshoot or repair video switchers	44
M0402	Maintain TO libraries	33

TABLE A2b

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN THE
VISUAL IMAGERY MAINTENANCE JOB
(N=6)

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 46	PERCENT MEMBERS PERFORMING
F0214	Perform PMIs on VTRs	100
A0022	Perform operational checks on cables, other than fiber-optic cables	100
A0040	Troubleshoot or repair cables, other than fiber-optic cables	100
A0020	Perform soldering techniques	100
C0111	Perform PMIs on monitors or receivers	100
C0110	Perform operational checks on monitors or receivers	100
A0029	Perform preventive maintenance inspections (PMIs) on cameras	83
A0012	Fabricate cables, other than fiber-optic cables	83
F0194	Operate video test signal generators	83
A0036	Remove or replace batteries	83
M0402	Maintain TO libraries	67
F0238	Troubleshoot or repair VTR circuits	67
A0018	Perform corrosion control procedures	67
A0019	Perform equipment grounding procedures	67
E0172	Perform operational checks on video camera systems	67
F0193	Configure nonlinear editing systems	50
F0202	Perform operational checks on nonlinear editing systems	50
C0112	Perform PMIs on video projection systems	50
A0014	Install application software	50
F0215	Set up or tear down electronic field production systems	50
A0015	Install operating system software	50
F0191	Align VTR mechanical systems	50
F0225	Troubleshoot or repair nonlinear editing systems	50
C0108	Align video projection systems	50
N0417	Research information to determine new equipment capabilities	50
P0451	Conduct on-the-job training (OJT)	50
F0239	Troubleshoot or repair VTR mechanical systems	33
A0010	Configure operating system software	33

TABLE A2c

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN THE
VISUAL IMAGERY AND INTRUSION DETECTION SYSTEMS GUARD JOB
(N=14)

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 128	PERCENT MEMBERS PERFORMING
A0040	Troubleshoot or repair cables, other than fiber-optic cables	100
A0012	Fabricate cables, other than fiber-optic cables	100
A0022	Perform operational checks on cables, other than fiber-optic cables	100
A0036	Remove or replace batteries	100
C0110	Perform operational checks on monitors or receivers	100
N0411	Inventory equipment, tools, parts, or supplies	93
A0023	Perform operational checks on fiber-optic cables	93
A0020	Perform soldering techniques	93
N0408	Evaluate serviceability of equipment, tools, parts, or supplies	86
A0018	Perform corrosion control procedures	86
A0037	Remove or replace fiber-optic cables	86
C0108	Align video projection systems	86
N0417	Research information to determine new equipment capabilities	86
A0021	Perform operational checks on batteries	86
D0138	Perform operational checks on audio speaker systems	86
D0132	Perform operational checks on audio amplifiers	86
A0043	Troubleshoot or repair fiber-optic cables	79
J0334	Troubleshoot or repair cable head-end systems	79
A0025	Perform operational checks on intercom or interphone systems	79
B0064	Align public address systems	79
N0416	Pick up, deliver, or store equipment, tools, parts, or supplies	79
A0038	Remove or replace fiber-optic systems	79
A0019	Perform equipment grounding procedures	79
J0335	Troubleshoot or repair radio or TV antenna systems	79
C0111	Perform PMIs on monitors or receivers	79
D0144	Perform operational checks on microphones	79
D0156	Troubleshoot or repair audio speaker systems	79
D0136	Perform operational checks on audio mixers, such as consoles or microphone mixers	79
N0410	Initiate requisitions for equipment, tools, parts, or supplies	71
A0046	Troubleshoot or repair intercom or interphone systems	71
B0098	Troubleshoot or repair public address systems	71
N0412	Issue or log turn-ins of equipment, tools, parts, or supplies	71
B0101	Troubleshoot or repair video surveillance control equipment	71
A0013	Fabricate fiber-optic cables	71

TABLE A2d

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN THE
VIDEO PRODUCTION MAINTENANCE JOB
(N=11)

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 68	PERCENT MEMBERS PERFORMING
A0020	Perform soldering techniques	100
E0175	Troubleshoot or repair camera recording units	100
A0012	Fabricate cables, other than fiber-optic cables	91
A0001	Adjust camera body electronic or mechanical components	91
A0041	Troubleshoot or repair camera body electronic or mechanical components	91
E0170	Perform operational checks on camera recording units	91
A0040	Troubleshoot or repair cables, other than fiber-optic cables	91
E0169	Align video camera lens backfocus	91
C0110	Perform operational checks on monitors or receivers	91
E0167	Adjust video camera operating controls, such as iris or setup controls	91
F0214	Perform PMIs on VTRs	82
E0173	Perform PMIs on camera recording units	82
E0174	Perform PMIs on video camera systems	82
A0029	Perform preventive maintenance inspections (PMIs) on cameras	82
F0191	Align VTR mechanical systems	82
E0172	Perform operational checks on video camera systems	82
C0111	Perform PMIs on monitors or receivers	82
A0022	Perform operational checks on cables, other than fiber-optic cables	82
N0411	Inventory equipment, tools, parts, or supplies	82
F0202	Perform operational checks on nonlinear editing systems	73
E0178	Troubleshoot or repair video camera circuits	73
F0190	Align videotape recorder (VTR) circuits	73
E0179	Troubleshoot or repair video camera systems	73
F0194	Operate video test signal generators	73
A0018	Perform corrosion control procedures	64
A0011	Enter data into maintenance management systems, such as Core Automated Maintenance Systems (CAMS)	64
N0409	Identify and report equipment or supply problems	64
N0413	Maintain documentation on items requiring periodic inspections or calibrations	64
A0014	Install application software	64
F0193	Configure nonlinear editing systems	64
A0002	Adjust shutter speeds	64
A0036	Remove or replace batteries	64

TABLE A2e

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN THE
BROADCAST MAINTENANCE JOB
(N=55)

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 155	PERCENT MEMBERS PERFORMING
A0022	Perform operational checks on cables, other than fiber-optic cables	100
A0020	Perform soldering techniques	98
E0172	Perform operational checks on video camera systems	96
A0012	Fabricate cables, other than fiber-optic cables	95
F0194	Operate video test signal generators	95
E0169	Align video camera lens backfocus	95
E0167	Adjust video camera operating controls, such as iris or setup controls	93
F0214	Perform PMIs on VTRs	91
A0040	Troubleshoot or repair cables, other than fiber-optic cables	91
F0238	Troubleshoot or repair VTR circuits	91
F0190	Align videotape recorder (VTR) circuits	91
E0170	Perform operational checks on camera recording units	91
E0179	Troubleshoot or repair video camera systems	91
D0132	Perform operational checks on audio amplifiers	91
D0133	Perform operational checks on audio DAs	91
E0168	Align video camera circuits	91
F0239	Troubleshoot or repair VTR mechanical systems	89
F0191	Align VTR mechanical systems	89
E0174	Perform PMIs on video camera systems	89
F0212	Perform operational checks on video switchers	89
C0110	Perform operational checks on monitors or receivers	89
E0175	Troubleshoot or repair camera recording units	89
E0178	Troubleshoot or repair video camera circuits	89
D0121	Align audio distribution amplifiers (DAs)	89
D0144	Perform operational checks on microphones	89
D0141	Perform operational checks on CD players	89
F0195	Perform color balance procedures	87
F0236	Troubleshoot or repair video switchers	87
D0122	Align audio mixers, such as consoles or microphone mixers	87
A0019	Perform equipment grounding procedures	87
E0166	Adjust camera control unit (CCU) controls, such as black balance, iris, or master pedestal	85
F0213	Perform operational checks on video test signal generators	85
E0171	Perform operational checks on CCUs	85

TABLE A3

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN THE
PHOTOGRAPHIC MAINTENANCE IJ
(N=13)

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 114	PERCENT MEMBERS PERFORMING
G0245	Perform PMIs on processors or mini-labs	100
H0278	Perform PMIs on hydromixers	100
G0253	Troubleshoot or repair processor or mini-lab electrical or electronic systems	100
G0257	Troubleshoot or repair processor rollers or roller bearing system components	100
A0018	Perform corrosion control procedures	100
G0251	Troubleshoot or repair processor or mini-lab chemical replenishing systems	100
H0283	Perform PMIs on silver recovery units	100
G0252	Troubleshoot or repair processor or mini-lab drive systems	100
G0256	Troubleshoot or repair processor or mini-lab water systems	100
G0254	Troubleshoot or repair processor or mini-lab recirculation systems	100
G0243	Connect or disconnect processor water-mixing valves	100
H0298	Troubleshoot or repair hydromixers	100
G0255	Troubleshoot or repair processor or mini-lab temperature control systems	100
A0020	Perform soldering techniques	100
H0303	Troubleshoot or repair silver recovery units or components	100
G0246	Troubleshoot or repair film tracking mechanisms	92
H0291	Troubleshoot or repair chemical mixing pumps	92
H0275	Perform PMIs on film editing tables	92
H0273	Perform PMIs on densitometers	92
H0292	Troubleshoot or repair densitometers	92
I0313	Perform operational checks on continuous contact printers	92
H0299	Troubleshoot or repair light tables	92
I0317	Troubleshoot or repair continuous contact printers	92
I0309	Adjust continuous contact printers	92
H0295	Troubleshoot or repair film editing tables	92
G0244	Perform operational checks on processors or mini-labs	85
H0279	Perform PMIs on light tables	85
H0262	Adjust light tables	85
H0287	Remove or replace chemical filter system components	85
G0249	Troubleshoot or repair processor or mini-lab aeration systems	85

TABLE A4

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN THE
BASIC TELEVISION EQUIPMENT MAINTENANCE (BTVEM) INSTRUCTION IJ
(N=5)

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 25	PERCENT MEMBERS PERFORMING
P0450	Conduct formal course classroom training	100
P0447	Administer or score tests	100
P0464	Personalize lesson plans	80
P0457	Develop or procure training materials or aids	80
P0456	Develop written tests	80
P0455	Develop training programs, plans, or procedures	60
P0461	Evaluate progress of trainees	60
P0452	Counsel trainees on training progress	60
P0454	Develop formal course curricula, plans of instruction (POIs), or specialty training standards (STSs)	40
Q0499	Inspect personnel for compliance with military standards	40
C0104	Align monitor or receiver deflection or convergence circuits	40
Q0476	Counsel subordinates concerning personal matters	40
P0463	Maintain training records or files	40
C0106	Align monitor or receiver video circuits	40
C0109	Degauss cathode-ray tubes (CRTs)	40
C0110	Perform operational checks on monitors or receivers	40
C0105	Align monitor or receiver high-voltage or low-voltage circuits	40
P0449	Complete student entry or withdrawal forms	20
C0117	Troubleshoot or repair monitor or receiver high-voltage or low-voltage circuits	20
C0118	Troubleshoot or repair monitor or receiver video circuits	20
Q0495	Evaluate maintenance or utilization of equipment, tools, parts, supplies, or workspace	20
J0329	Perform operational checks on radio or TV modulators or demodulators	20
J0338	Troubleshoot or repair radio or TV transmitter circuits	20
J0326	Perform radio or TV transmitter proof-of-performance checks	20

TABLE A5

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN THE
MANAGEMENT/SUPERVISION CLUSTER
(N=66)

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 90	PERCENT MEMBERS PERFORMING
Q0476	Counsel subordinates concerning personal matters	97
Q0511	Write or indorse military performance reports	95
Q0512	Write recommendations for awards or decorations	92
Q0500	Interpret policies, directives, or procedures for subordinates	92
Q0499	Inspect personnel for compliance with military standards	91
Q0493	Evaluate personnel for compliance with performance standards	89
P0463	Maintain training records or files	88
Q0473	Conduct supervisory performance feedback sessions	88
P0453	Determine training requirements	88
P0452	Counsel trainees on training progress	86
Q0471	Conduct self-inspections or self-assessments	86
Q0489	Establish performance standards for subordinates	86
P0461	Evaluate progress of trainees	85
P0451	Conduct on-the-job training (OJT)	85
Q0475	Conduct supervisory orientations for newly assigned personnel	83
Q0474	Conduct safety inspections of equipment or facilities	80
P0448	Brief personnel concerning training programs or matters	79
Q0513	Write replies to inspection reports	79
Q0494	Evaluate personnel for promotion, demotion, reclassification, or special awards	77
Q0478	Determine or establish work assignments or priorities	77
Q0477	Determine or establish logistics requirements, such as personnel, equipment, tools, parts, supplies, or workspace	77
N0408	Evaluate serviceability of equipment, tools, parts, or supplies	77
M0399	Maintain administrative files	76
Q0506	Schedule personnel for TDY assignments, leaves, or passes	76
M0390	Compile data for records, reports, logs, or trend analyses	74
Q0495	Evaluate maintenance or utilization of equipment, tools, parts, supplies, or workspace	74
N0410	Initiate requisitions for equipment, tools, parts, or supplies	74
Q0470	Conduct general meetings, such as staff meetings, briefings, conferences, or workshops	73
N0406	Coordinate maintenance of equipment with appropriate agencies	73
Q0490	Establish procedures for accountability of equipment, tools, parts, or supplies	73

TABLE A5a

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN THE
NCOIC INTRUSION DETECTION SYSTEMS MAINTENANCE JOB
(N=43)

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 102	PERCENT MEMBERS PERFORMING
Q0511	Write or indorse military performance reports	98
Q0500	Interpret policies, directives, or procedures for subordinates	98
Q0512	Write recommendations for awards or decorations	98
Q0476	Counsel subordinates concerning personal matters	98
Q0493	Evaluate personnel for compliance with performance standards	95
Q0499	Inspect personnel for compliance with military standards	95
Q0489	Establish performance standards for subordinates	95
Q0473	Conduct supervisory performance feedback sessions	95
P0452	Counsel trainees on training progress	93
Q0477	Determine or establish logistics requirements, such as personnel, equipment, tools, parts, supplies, or workspace	93
Q0474	Conduct safety inspections of equipment or facilities	93
Q0475	Conduct supervisory orientations for newly assigned personnel	93
P0461	Evaluate progress of trainees	91
P0453	Determine training requirements	91
Q0513	Write replies to inspection reports	91
Q0471	Conduct self-inspections or self-assessments	91
Q0490	Establish procedures for accountability of equipment, tools, parts, or supplies	91
Q0506	Schedule personnel for TDY assignments, leaves, or passes	91
Q0478	Determine or establish work assignments or priorities	88
P0451	Conduct on-the-job training (OJT)	88
Q0495	Evaluate maintenance or utilization of equipment, tools, parts, supplies, or workspace	88
Q0494	Evaluate personnel for promotion, demotion, reclassification, or special awards	86
P0463	Maintain training records or files	86
Q0496	Implement safety or security programs	86
M0399	Maintain administrative files	86
Q0492	Evaluate job hazards or compliance with Occupational Risk Management (ORM) program	86
Q0484	Develop or establish work schedules	84
N0406	Coordinate maintenance of equipment with appropriate agencies	84
Q0483	Develop or establish work methods or procedures	84

TABLE A5b

REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN THE
VISUAL IMAGERY MAINTENANCE SUPERVISION JOB
(N=5)

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 135	PERCENT MEMBERS PERFORMING
Q0511	Write or indorse military performance reports	100
Q0512	Write recommendations for awards or decorations	100
Q0468	Assign personnel to work areas or duty positions	100
P0451	Conduct on-the-job training (OJT)	100
Q0498	Initiate actions required due to substandard performance of personnel	100
Q0493	Evaluate personnel for compliance with performance standards	100
Q0473	Conduct supervisory performance feedback sessions	100
P0452	Counsel trainees on training progress	100
Q0475	Conduct supervisory orientations for newly assigned personnel	100
Q0499	Inspect personnel for compliance with military standards	100
P0463	Maintain training records or files	100
A0029	Perform preventive maintenance inspections (PMIs) on cameras	100
C0110	Perform operational checks on monitors or receivers	100
Q0476	Counsel subordinates concerning personal matters	100
Q0478	Determine or establish work assignments or priorities	100
P0453	Determine training requirements	100
N0411	Inventory equipment, tools, parts, or supplies	100
Q0471	Conduct self-inspections or self-assessments	100
E0169	Align video camera lens backfocus	100
E0168	Align video camera circuits	100
D0156	Troubleshoot or repair audio speaker systems	100
A0036	Remove or replace batteries	100
N0410	Initiate requisitions for equipment, tools, parts, or supplies	100
A0019	Perform equipment grounding procedures	100
F0214	Perform PMIs on VTRs	80
E0170	Perform operational checks on camera recording units	80
P0455	Develop training programs, plans, or procedures	80
Q0494	Evaluate personnel for promotion, demotion, reclassification, or special awards	80
E0172	Perform operational checks on video camera systems	80
E0174	Perform PMIs on video camera systems	80
N0417	Research information to determine new equipment capabilities	80
P0448	Brief personnel concerning training programs or matters	80

TABLE A5c

**REPRESENTATIVE TASKS PERFORMED BY MEMBERS IN THE
MAINTENANCE SUPPORT MANAGEMENT JOB
(N=12)**

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 40	PERCENT MEMBERS PERFORMING
Q0476	Counsel subordinates concerning personal matters	92
P0463	Maintain training records or files	92
Q0500	Interpret policies, directives, or procedures for subordinates	92
M0390	Compile data for records, reports, logs, or trend analyses	83
Q0512	Write recommendations for awards or decorations	83
Q0511	Write or indorse military performance reports	83
Q0493	Evaluate personnel for compliance with performance standards	75
P0461	Evaluate progress of trainees	75
M0403	Maintain or update status indicators, such as boards, graphs, or charts	75
Q0488	Establish organizational policies, such as operating instructions (OIs) or standard operating procedures (SOPs)	75
Q0508	Write job or position descriptions	75
Q0499	Inspect personnel for compliance with military standards	67
Q0471	Conduct self-inspections or self-assessments	67
Q0494	Evaluate personnel for promotion, demotion, reclassification, or special awards	67
Q0470	Conduct general meetings, such as staff meetings, briefings, conferences, or workshops	67
P0448	Brief personnel concerning training programs or matters	67
M0399	Maintain administrative files	67
P0451	Conduct on-the-job training (OJT)	67
Q0489	Establish performance standards for subordinates	67
P0453	Determine training requirements	67
Q0473	Conduct supervisory performance feedback sessions	58
Q0491	Evaluate inspection report findings or inspection procedures	58
Q0513	Write replies to inspection reports	58
Q0481	Develop self-inspection or self-assessment program checklists	58
N0408	Evaluate serviceability of equipment, tools, parts, or supplies	58
Q0507	Write inspection reports	50
Q0505	Review drafts of supplements or changes to directives, such as policy directives, instructions, or manuals	50
Q0495	Evaluate maintenance or utilization of equipment, tools, parts, supplies, or workspace	42

TABLE A6**SPECIALTY JOB COMPARISONS BETWEEN CURRENT AND 2000 SURVEYS**

CURRENT SURVEY (N=271)		2000 SURVEY (N=345)	
INTRUSION DETECTION SYSTEMS MAINTENANCE IJ	21%	INTRUSION DETECTION SYSTEMS MAINTENANCE CLUSTER Intrusion Detection Systems Job Entry-Level Intrusion Detection Systems Job	21%
VISUAL IMAGERY MAINTENANCE CLUSTER Maintenance Support Job Visual Imagery Maintenance Job Video Production Maintenance Job Broadcast Maintenance Job Visual Imagery and Intrusion Detection Systems Guard Job	37%	MULTIMEDIA EQUIPMENT MAINTENANCE CLUSTER Monitors and Receivers Job Visual Information Equipment Job Still Camera Systems Job Studio Equipment Job —	43%
PHOTOGRAPHIC MAINTENANCE IJ	5%	PHOTO IMAGERY EQUIPMENT MAINTENANCE JOB	8%
BASIC TELEVISION EQUIPMENT MAINTENANCE (BTVEM) INSTRUCTION IJ	2%	INSTRUCTOR JOB	2%
MANAGEMENT/SUPERVISION CLUSTER NCOIC Intrusion Detection Systems Maintenance Job Visual Imagery Maintenance Supervision Job Maintenance Support Management Job	24%	SUPERVISOR/MANAGER JOB	10%
—		CONTROLLER JOB	1%

— Indicates cluster/job not found in study

TABLE A7

DISTRIBUTION OF AFSC 2E1X4 SKILL-LEVEL MEMBERS
ACROSS CAREER LADDER JOBS
(PERCENT IN EACH JOB)

<u>SPECIALTY JOBS</u>	DAFSC 2E134 (N=73)	DAFSC 2E154 (N=115)	DAFSC 2E174 (N=83)
INTRUSION DETECTION SYSTEMS MAINTENANCE IJ	55	13	2
VISUAL IMAGERY MAINTENANCE CLUSTER	29	42	39
PHOTOGRAPHIC MAINTENANCE IJ	4	4	6
BTVM INSTRUCTION IJ	*	4	1
MANAGEMENT/SUPERVISION CLUSTER	3	26	41
NOT GROUPED	9	11	11

* Indicates less than 1%

Note: Columns may not add up to 100% due to rounding

TABLE A8

TIME SPENT ON DUTIES BY TOTAL MEMBERS OF
AFSC 2E1X4 SKILL-LEVEL GROUPS
(PERCENT RESPONDING)

<u>DUTIES</u>	TOTAL 2E134 (N=73)	TOTAL 2E154 (N=115)	TOTAL 2E174 (N=83)
A PERFORMING GENERAL MAINTENANCE ACTIVITIES	27	20	16
B PERFORMING INTRUSION DETECTION SYSTEMS MAINTENANCE ACTIVITIES	26	9	4
C PERFORMING MONITOR, RECEIVER, AND PROJECTION MAINTENANCE ACTIVITIES	5	4	3
D PERFORMING AUDIO SYSTEM MAINTENANCE ACTIVITIES	4	7	6
E PERFORMING VIDEO CAMERA SYSTEM MAINTENANCE ACTIVITIES	4	7	3
F PERFORMING STUDIO, PRODUCTION, AND AUXILIARY EQUIPMENT MAINTENANCE ACTIVITIES	7	12	6
G PERFORMING PHOTOGRAPHIC PROCESSING EQUIPMENT MAINTENANCE ACTIVITIES	1	1	1
H PERFORMING PHOTOGRAPHIC SUPPORT EQUIPMENT MAINTENANCE ACTIVITIES	2	2	2
I PERFORMING PRINTER SYSTEM MAINTENANCE ACTIVITIES	*	*	*
J PERFORMING RADIO FREQUENCY (RF) SYSTEM MAINTENANCE ACTIVITIES	1	3	3
K PERFORMING MICROWAVE AND SATELLITE SYSTEM MAINTENANCE ACTIVITIES	1	2	1
L PERFORMING DEPLOYABLE SHELTERIZED SYSTEMS- FILM (DSS-F) MAINTENANCE ACTIVITIES	*	*	1
M PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	4	4	6
N PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	8	8	10
O PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES	1	1	2
P PERFORMING TRAINING ACTIVITIES	4	8	9
Q PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	4	12	27

* Indicates less than 1%

Note: Columns may not add up to 100% due to rounding

TABLE A9

TIME SPENT ON DUTIES BY **AD** MEMBERS OF AFSC 2E1X4 SKILL-LEVEL GROUPS
(PERCENT RESPONDING)

<u>DUTIES</u>	AD 2E134 (N=72)	AD 2E154 (N=114)	AD 2E174 (N=59)
A PERFORMING GENERAL MAINTENANCE ACTIVITIES	27	20	12
B PERFORMING INTRUSION DETECTION SYSTEMS MAINTENANCE ACTIVITIES	27	9	3
C PERFORMING MONITOR, RECEIVER, AND PROJECTION MAINTENANCE ACTIVITIES	5	4	2
D PERFORMING AUDIO SYSTEM MAINTENANCE ACTIVITIES	4	7	5
E PERFORMING VIDEO CAMERA SYSTEM MAINTENANCE ACTIVITIES	4	7	3
F PERFORMING STUDIO, PRODUCTION, AND AUXILIARY EQUIPMENT MAINTENANCE ACTIVITIES	7	12	7
G PERFORMING PHOTOGRAPHIC PROCESSING EQUIPMENT MAINTENANCE ACTIVITIES	1	1	*
H PERFORMING PHOTOGRAPHIC SUPPORT EQUIPMENT MAINTENANCE ACTIVITIES	2	1	1
I PERFORMING PRINTER SYSTEM MAINTENANCE ACTIVITIES	*	*	*
J PERFORMING RADIO FREQUENCY (RF) SYSTEM MAINTENANCE ACTIVITIES	1	3	1
K PERFORMING MICROWAVE AND SATELLITE SYSTEM MAINTENANCE ACTIVITIES	1	2	1
L PERFORMING DEPLOYABLE SHELTERIZED SYSTEMS-FILM (DSS-F) MAINTENANCE ACTIVITIES	1	*	1
M PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	4	4	7
N PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	8	8	10
O PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES	1	1	2
P PERFORMING TRAINING ACTIVITIES	4	8	11
Q PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	4	12	36

* Indicates less than 1%

Note: Columns may not add up to 100% due to rounding

TABLE A10

REPRESENTATIVE TASKS PERFORMED BY **AD** DAFSC 2E134 PERSONNEL

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 68	PERCENT MEMBERS PERFORMING (N=72)
A0020	Perform soldering techniques	89
A0022	Perform operational checks on cables, other than fiber-optic cables	86
A0018	Perform corrosion control procedures	83
A0036	Remove or replace batteries	83
A0021	Perform operational checks on batteries	81
A0029	Perform preventive maintenance inspections (PMIs) on cameras	79
A0040	Troubleshoot or repair cables, other than fiber-optic cables	74
A0019	Perform equipment grounding procedures	72
A0012	Fabricate cables, other than fiber-optic cables	68
A0011	Enter data into maintenance management systems, such as Core Automated Maintenance Systems (CAMS)	64
N0411	Inventory equipment, tools, parts, or supplies	60
C0110	Perform operational checks on monitors or receivers	60
A0028	Perform operational checks on UPSs	60
P0451	Conduct on-the-job training (OJT)	57
B0078	Perform PMIs on interior IR sensors	56
B0079	Perform PMIs on interior magnetic sensors	54
B0095	Troubleshoot or repair interior IR sensors	53
B0096	Troubleshoot or repair interior magnetic sensors	53
B0097	Troubleshoot or repair interior microwave sensors	51
B0080	Perform PMIs on interior microwave sensors	51
N0413	Maintain documentation on items requiring periodic inspections or calibrations	51
C0111	Perform PMIs on monitors or receivers	50
A0034	Perform PMIs on UPSs	50
B0062	Align interior magnetic sensors	49
B0061	Align interior IR sensors	49
B0063	Align interior microwave sensors	47
N0408	Evaluate serviceability of equipment, tools, parts, or supplies	47
B0092	Troubleshoot or repair exterior fence sensors	46
N0409	Identify and report equipment or supply problems	46
B0075	Perform PMIs on exterior fence sensors	44
B0084	Perform PMIs on video surveillance control equipment	44
A0001	Adjust camera body electronic or mechanical components	43

TABLE A11

REPRESENTATIVE TASKS PERFORMED BY **AD** DAFSC 2E154 PERSONNEL

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 95	PERCENT MEMBERS PERFORMING (N=114)
A0020	Perform soldering techniques	83
A0022	Perform operational checks on cables, other than fiber-optic cables	78
N0411	Inventory equipment, tools, parts, or supplies	72
A0012	Fabricate cables, other than fiber-optic cables	72
A0036	Remove or replace batteries	72
A0040	Troubleshoot or repair cables, other than fiber-optic cables	71
A0019	Perform equipment grounding procedures	69
N0408	Evaluate serviceability of equipment, tools, parts, or supplies	67
C0110	Perform operational checks on monitors or receivers	65
A0018	Perform corrosion control procedures	65
N0406	Coordinate maintenance of equipment with appropriate agencies	63
A0029	Perform preventive maintenance inspections (PMIs) on cameras	63
N0417	Research information to determine new equipment capabilities	59
N0410	Initiate requisitions for equipment, tools, parts, or supplies	59
N0409	Identify and report equipment or supply problems	57
A0021	Perform operational checks on batteries	57
C0111	Perform PMIs on monitors or receivers	57
A0011	Enter data into maintenance management systems, such as Core Automated Maintenance Systems (CAMS)	56
E0169	Align video camera lens backfocus	56
E0167	Adjust video camera operating controls, such as iris or setup controls	54
P0451	Conduct on-the-job training (OJT)	54
N0416	Pick up, deliver, or store equipment, tools, parts, or supplies	54
E0174	Perform PMIs on video camera systems	51
P0463	Maintain training records or files	50
N0413	Maintain documentation on items requiring periodic inspections or calibrations	49
F0194	Operate video test signal generators	49
N0412	Issue or log turn-ins of equipment, tools, parts, or supplies	48
E0172	Perform operational checks on video camera systems	48
Q0499	Inspect personnel for compliance with military standards	47
P0452	Counsel trainees on training progress	46
E0179	Troubleshoot or repair video camera systems	46
N0407	Develop equipment checklists	46

TABLE A12

REPRESENTATIVE TASKS PERFORMED BY AD DAFSC 2E174 PERSONNEL

TASKS <i>AVERAGE NUMBER OF TASKS PERFORMED = 92</i>		PERCENT MEMBERS PERFORMING (N=59)
P0453	Determine training requirements	75
Q0500	Interpret policies, directives, or procedures for subordinates	75
Q0476	Counsel subordinates concerning personal matters	75
N0417	Research information to determine new equipment capabilities	71
Q0512	Write recommendations for awards or decorations	71
Q0511	Write or indorse military performance reports	69
Q0499	Inspect personnel for compliance with military standards	69
M0390	Compile data for records, reports, logs, or trend analyses	68
N0410	Initiate requisitions for equipment, tools, parts, or supplies	68
P0452	Counsel trainees on training progress	68
Q0495	Evaluate maintenance or utilization of equipment, tools, parts, supplies, or workspace	66
Q0477	Determine or establish logistics requirements, such as personnel, equipment, tools, parts, supplies, or workspace	66
M0399	Maintain administrative files	66
Q0471	Conduct self-inspections or self-assessments	66
Q0473	Conduct supervisory performance feedback sessions	66
Q0470	Conduct general meetings, such as staff meetings, briefings, conferences, or workshops	63
Q0493	Evaluate personnel for compliance with performance standards	63
P0463	Maintain training records or files	63
N0407	Develop equipment checklists	63
Q0513	Write replies to inspection reports	63
P0451	Conduct on-the-job training (OJT)	63
N0408	Evaluate serviceability of equipment, tools, parts, or supplies	63
N0409	Identify and report equipment or supply problems	61
N0406	Coordinate maintenance of equipment with appropriate agencies	61
Q0489	Establish performance standards for subordinates	61
N0411	Inventory equipment, tools, parts, or supplies	61
P0461	Evaluate progress of trainees	59
Q0478	Determine or establish work assignments or priorities	59
Q0475	Conduct supervisory orientations for newly assigned personnel	59
Q0506	Schedule personnel for TDY assignments, leaves, or passes	59
Q0491	Evaluate inspection report findings or inspection procedures	58
P0448	Brief personnel concerning training programs or matters	58

TABLE A13

**TIME SPENT ON DUTIES BY ANG MEMBERS OF DAFSC 2E174
(PERCENT RESPONDING)**

<u>DUTIES</u>	<u>ANG 2E174 (N=24)</u>
A PERFORMING GENERAL MAINTENANCE ACTIVITIES	26
B PERFORMING INTRUSION DETECTION SYSTEMS MAINTENANCE ACTIVITIES	7
C PERFORMING MONITOR, RECEIVER, AND PROJECTION MAINTENANCE ACTIVITIES	5
D PERFORMING AUDIO SYSTEM MAINTENANCE ACTIVITIES	8
E PERFORMING VIDEO CAMERA SYSTEM MAINTENANCE ACTIVITIES	4
F PERFORMING STUDIO, PRODUCTION, AND AUXILIARY EQUIPMENT MAINTENANCE ACTIVITIES	4
G PERFORMING PHOTOGRAPHIC PROCESSING EQUIPMENT MAINTENANCE ACTIVITIES	4
H PERFORMING PHOTOGRAPHIC SUPPORT EQUIPMENT MAINTENANCE ACTIVITIES	6
I PERFORMING PRINTER SYSTEM MAINTENANCE ACTIVITIES	1
J PERFORMING RADIO FREQUENCY (RF) SYSTEM MAINTENANCE ACTIVITIES	8
K PERFORMING MICROWAVE AND SATELLITE SYSTEM MAINTENANCE ACTIVITIES	1
L PERFORMING DEPLOYABLE SHELTERIZED SYSTEMS-FILM (DSS-F) MAINTENANCE ACTIVITIES	2
M PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	3
N PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	9
O PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES	4
P PERFORMING TRAINING ACTIVITIES	3
Q PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	5

* Indicates less than 1%

Note: Columns may not add up to 100% due to rounding

TABLE A14

REPRESENTATIVE TASKS PERFORMED BY **ANG** DAFSC 2E174 PERSONNEL

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 99	PERCENT MEMBERS PERFORMING (N=24)
A0012	Fabricate cables, other than fiber-optic cables	88
A0022	Perform operational checks on cables, other than fiber-optic cables	88
A0020	Perform soldering techniques	88
A0040	Troubleshoot or repair cables, other than fiber-optic cables	83
N0411	Inventory equipment, tools, parts, or supplies	79
N0408	Evaluate serviceability of equipment, tools, parts, or supplies	75
A0036	Remove or replace batteries	75
C0110	Perform operational checks on monitors or receivers	71
N0417	Research information to determine new equipment capabilities	67
A0018	Perform corrosion control procedures	67
A0019	Perform equipment grounding procedures	67
A0021	Perform operational checks on batteries	67
N0416	Pick up, deliver, or store equipment, tools, parts, or supplies	62
N0410	Initiate requisitions for equipment, tools, parts, or supplies	62
N0406	Coordinate maintenance of equipment with appropriate agencies	62
A0014	Install application software	58
A0037	Remove or replace fiber-optic cables	54
A0023	Perform operational checks on fiber-optic cables	54
A0043	Troubleshoot or repair fiber-optic cables	54
B0098	Troubleshoot or repair public address systems	54
D0156	Troubleshoot or repair audio speaker systems	54
O0446	Tear down, inspect, clean, and reassemble weapons, such as M-16 rifles	54
A0013	Fabricate fiber-optic cables	50
A0046	Troubleshoot or repair intercom or interphone systems	50
J0336	Troubleshoot or repair radio or TV modulators or demodulators	50
A0038	Remove or replace fiber-optic systems	50
N0409	Identify and report equipment or supply problems	50
A0015	Install operating system software	50
N0412	Issue or log turn-ins of equipment, tools, parts, or supplies	50
J0328	Perform operational checks on radio or TV antenna systems	50
A0027	Perform operational checks on power supplies, other than UPSs	50
O0423	Don or doff chemical warfare personal protective equipment (PPE)	46
A0024	Perform operational checks on fiber-optic systems	46
P0451	Conduct on-the-job training (OJT)	46

TABLE A15

PERCENT TIME SPENT ON DUTIES BY
FIRST-ENLISTMENT PERSONNEL (1–48 MONTHS' TAFMS)

<u>DUTIES</u>	<u>1-48 MONTHS' TAFMS (N=94)</u>
A PERFORMING GENERAL MAINTENANCE ACTIVITIES	28
B PERFORMING INTRUSION DETECTION SYSTEMS MAINTENANCE ACTIVITIES	22
C PERFORMING MONITOR, RECEIVER, AND PROJECTION MAINTENANCE ACTIVITIES	5
D PERFORMING AUDIO SYSTEM MAINTENANCE ACTIVITIES	5
E PERFORMING VIDEO CAMERA SYSTEM MAINTENANCE ACTIVITIES	5
F PERFORMING STUDIO, PRODUCTION, AND AUXILIARY EQUIPMENT MAINTENANCE ACTIVITIES	10
G PERFORMING PHOTOGRAPHIC PROCESSING EQUIPMENT MAINTENANCE ACTIVITIES	*
H PERFORMING PHOTOGRAPHIC SUPPORT EQUIPMENT MAINTENANCE ACTIVITIES	*
I PERFORMING PRINTER SYSTEM MAINTENANCE ACTIVITIES	*
J PERFORMING RADIO FREQUENCY (RF) SYSTEM MAINTENANCE ACTIVITIES	1
K PERFORMING MICROWAVE AND SATELLITE SYSTEM MAINTENANCE ACTIVITIES	2
L PERFORMING DEPLOYABLE SHELTERIZED SYSTEMS-FILM (DSS-F) MAINTENANCE ACTIVITIES	*
M PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	4
N PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	9
O PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES	1
P PERFORMING TRAINING ACTIVITIES	3
Q PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	4

* Indicates less than 1%

Note: Column does not add up to 100% due to rounding

TABLE A16

**REPRESENTATIVE TASKS PERFORMED BY AFSC 2E1X4
FIRST-ENLISTMENT PERSONNEL (1–48 MONTHS’ TAFMS)**

TASKS	AVERAGE NUMBER OF TASKS PERFORMED = 69	PERCENT MEMBERS PERFORMING (N=94)
A0020	Perform soldering techniques	87
A0022	Perform operational checks on cables, other than fiber-optic cables	86
A0036	Remove or replace batteries	82
A0029	Perform preventive maintenance inspections (PMIs) on cameras	78
A0018	Perform corrosion control procedures	78
A0040	Troubleshoot or repair cables, other than fiber-optic cables	78
A0021	Perform operational checks on batteries	77
A0019	Perform equipment grounding procedures	73
A0012	Fabricate cables, other than fiber-optic cables	68
C0110	Perform operational checks on monitors or receivers	65
N0411	Inventory equipment, tools, parts, or supplies	62
A0011	Enter data into maintenance management systems, such as Core Automated Maintenance Systems (CAMS)	61
A0028	Perform operational checks on UPSs	59
C0111	Perform PMIs on monitors or receivers	53
N0408	Evaluate serviceability of equipment, tools, parts, or supplies	52
A0034	Perform PMIs on UPSs	48
A0001	Adjust camera body electronic or mechanical components	48
N0413	Maintain documentation on items requiring periodic inspections or calibrations	47
B0078	Perform PMIs on interior IR sensors	46
E0169	Align video camera lens backfocus	46
B0079	Perform PMIs on interior magnetic sensors	45
B0080	Perform PMIs on interior microwave sensors	44
B0096	Troubleshoot or repair interior magnetic sensors	44
P0451	Conduct on-the-job training (OJT)	44
N0409	Identify and report equipment or supply problems	44
A0041	Troubleshoot or repair camera body electronic or mechanical components	44
B0097	Troubleshoot or repair interior microwave sensors	43
B0095	Troubleshoot or repair interior IR sensors	43
N0406	Coordinate maintenance of equipment with appropriate agencies	43
B0062	Align interior magnetic sensors	41
E0172	Perform operational checks on video camera systems	41
M0402	Maintain TO libraries	40

TABLE A17

EQUIPMENT OR SYSTEMS USED, OPERATED, OR MAINTAINED BY
FIRST-ENLISTMENT AFSC 2E1X4 PERSONNEL
(PERCENT USING, OPERATING, OR MAINTAINING)

EQUIPMENT OR SYSTEMS	(N=94)
Multimeters, Digital	83
Oscilloscopes	80
Waveform Monitors	63
Video Cameras	61
Television (TV) Monitors	57
Video Monitors	52
Digital Voltmeters	52
Power Supplies	51
Signal Generators	51
Video Test Signal Generators	49
Interior Intrusion Detection Systems Equipment	48
Uninterruptible Power Supplies	48
Closed-Circuit Televisions	46
Videotape Recorders (VTRs)	44
Vectorscopes	44
Exterior Intrusion Detection Systems Equipment	43
Video Cassette Recorders (VCRs)	41
Switchers	40
Digital Video Recorders	38
Camcorders	36
Video Editors	36
High-Voltage Probes	36
Distribution Amplifiers	35
Multimeters, Analog	35
Video Playback Units	34
Ammeters	31
Nonlinear Editors	30
Collimators	30
Torque Wrenches	30

TABLE A18

AFSC 2E1X4 TASKS WITH HIGHEST TRAINING EMPHASIS (TE) RATINGS

TASKS		TNG EMP*	TSK DIF**	ATI***	PERCENT MEMBERS PERFORMING	
					1ST ENL	3- LVL
A0019	Perform equipment grounding procedures	6.68	2.99	13	73	72
A0020	Perform soldering techniques	6.63	3.17	13	87	89
A0022	Perform operational checks on cables, other than fiber-optic cables	6.16	1.97	13	86	86
A0018	Perform corrosion control procedures	5.84	2.50	13	78	83
A0012	Fabricate cables, other than fiber-optic cables	5.63	2.93	13	68	68
A0027	Perform operational checks on power supplies, other than UPSs	5.47	2.99	10	38	36
A0040	Troubleshoot or repair cables, other than fiber-optic cables	5.16	3.61	13	78	74
A0029	Perform preventive maintenance inspections (PMIs) on cameras	5.11	4.47	18	78	79
F0214	Perform PMIs on VTRs	5.00	5.17	12	30	21
C0111	Perform PMIs on monitors or receivers	4.95	3.59	13	53	50
C0110	Perform operational checks on monitors or receivers	4.89	3.52	13	65	60
E0167	Adjust video camera operating controls, such as iris or setup controls	4.79	4.89	12	39	26
B0062	Align interior magnetic sensors	4.68	5.24	12	41	49
F0212	Perform operational checks on video switchers	4.63	4.96	12	31	21
D0133	Perform operational checks on audio DAs	4.63	4.18	12	30	22
E0174	Perform PMIs on video camera systems	4.58	5.18	12	38	32
E0169	Align video camera lens backfocus	4.58	4.72	12	46	39
A0021	Perform operational checks on batteries	4.58	2.06	13	77	81
E0173	Perform PMIs on camera recording units	4.58	5.12	11	23	18
E0172	Perform operational checks on video camera systems	4.58	4.71	12	41	38

* Mean TE Rating = 2.01; Standard Deviation = 1.46; High TE = 3.47

** Mean TD Rating = 5.00; Standard Deviation = 1.00; High TD = 6.00

*** ATI = Automated Training Indicator is training decision value for resident training (18 = high; 1 = low)

TABLE A19

AFSC 2E1X4 TASKS WITH HIGHEST TASK DIFFICULTY (TD) RATINGS

TASKS		TSK DIF*	TNG EMP**	ATI***	PERCENT MEMBERS PERFORMING			
					1ST ENL	3- LVL	5- LVL	7- LVL
F0191	Align VTR mechanical systems	7.49	4.00	11	28	24	41	17
F0239	Troubleshoot or repair VTR mechanical systems	7.40	3.95	11	27	19	35	24
F0190	Align videotape recorder (VTR) circuits	7.34	3.68	12	30	25	39	17
F0225	Troubleshoot or repair nonlinear editing systems	7.21	2.00	2	18	13	32	24
F0238	Troubleshoot or repair VTR circuits	7.10	3.53	11	26	21	32	22
F0219	Troubleshoot or repair DVEs	7.06	.84	2	5	6	13	10
F0220	Troubleshoot or repair editing systems, other than nonlinear editing systems	7.05	2.05	7	10	8	22	12
F0180	Align digital video effects (DVEs) generators	6.98	.79	2	11	8	15	14
C0117	Troubleshoot or repair monitor or receiver high-voltage or low-voltage circuits	6.93	3.42	7	14	11	23	19
F0222	Troubleshoot or repair frame synchronizers	6.90	1.11	2	12	10	21	15
E0175	Troubleshoot or repair camera recording units	6.86	3.16	7	27	17	42	25
F0193	Configure nonlinear editing systems	6.85	4.26	11	23	15	39	22
B0089	Troubleshoot or repair computer-based annunciators	6.84	3.21	7	26	31	20	10
C0116	Troubleshoot or repair monitor or receiver deflection or convergence circuits	6.84	2.89	7	13	10	21	19

*Mean TE Rating = 2.01; Standard Deviation = 1.46; High TE = 3.47

**Mean TD Rating = 5.00; Standard Deviation = 1.00; High TD = 6.00

***ATI = Automated Training Indicator is training decision value for resident training (18 = high; 1 = low)

TABLE A20

**EXAMPLES OF CTS ELEMENTS NOT SUPPORTED BY SURVEY DATA
(LESS THAN 20% MEMBERS PERFORMING)**

UNIT	CTS ELEMENT	PERCENT MEMBERS PERFORMING		TNG EMP*	TSK DIF**	ATI***
		1ST ENL (N=94)	3- LVL (N=72)			
II.7.5.4.	Modulators (TV/Radio) (II.7.5. Introduction to Cable Head-End Systems. Identify the basic fundamentals of:)					
Task	J0320. Align radio or TV modulators or demodulators	3	1	3.47	5.92	11
II.7.7.	Identify basic fundamentals and characteristics of satellite transmission, perform troubleshooting to unit level (e.g. dish, feedhorn, LNB, etc) and identify principles of compression transmission (II.7. Transmission and Distribution Systems)					
Task	K0342. Align satellite uplink or downlink systems	12	7	3.74	6.19	11
II.9.3.	Perform operational checks on computer-embedded systems (II.9. Computer Embedded Systems)					
Task	F0206. Perform operational checks on synchronization generators	14	10	4.05	4.89	11
I.4.3.	Identify basic principles of fiber optic systems (I.4. Intrusion Detection Systems IDS)					
Task	A0003. Align fiber-optic systems	15	14	1.26	5.45	2

*Mean TE Rating = 2.01; Standard Deviation = 1.46; High TE = 3.47

**Mean TD Rating = 5.00; Standard Deviation = 1.00; High TD = 6.00

***ATI = Automated Training Indicator is training decision value for resident training (18 = high; 1 = low)

TABLE A21

EXAMPLES OF TASKS PERFORMED BY 20% OR MORE MEMBERS
BUT NOT REFERENCED TO ANY CTS ELEMENT

TASKS		TNG EMP*	PERCENT MEMBERS PERFORMING		TSK DIF**	ATI***
			1ST ENL (N=94)	3- LVL (N=72)		
A0028	Perform operational checks on UPSs	3.79	59	60	3.14	13
A0029	Perform preventive maintenance inspections (PMIs) on cameras	5.11	78	79	4.47	18
A0033	Perform PMIs on power supplies, other than UPSs	4.47	33	28	3.71	10
A0036	Remove or replace batteries	3.79	82	83	1.94	13
A0050	Troubleshoot or repair UPSs	1.79	40	39	5.66	14
B0070	Perform PMIs on annunciators, other than computer-based annunciators	3.95	28	31	5.06	11
C0111	Perform PMIs on monitors or receivers	4.95	53	50	3.59	13
C0112	Perform PMIs on video projection systems	3.68	26	24	4.11	11
E0170	Perform operational checks on camera recording units	3.74	31	22	4.57	12
N0407	Develop equipment checklists	1.21	34	33	4.10	14

*Mean TE Rating = 2.01; Standard Deviation = 1.46; High TE = 3.47

**Mean TD Rating = 5.00; Standard Deviation = 1.00; High TD = 6.00

***ATI = Automated Training Indicator is training decision value for resident training (18 = high; 1 = low)

TABLE A22

**EXAMPLES OF POI (KEESLER) OBJECTIVES NOT SUPPORTED BY SURVEY DATA
(LESS THAN 30% MEMBERS PERFORMING)**

UNIT	LEARNING OBJECTIVE	PERCENT MEMBERS PERFORMING		TNG EMP*	TSK DIF**	ATI***
		1ST ENL (N=94)	3- LVL (N=72)			
IV.1.a.	Identify Security Monitoring and Reporting Terminal (SMART) system component functions (IV.1. Annunciator System Operation)					
Tasks	B0054. Align communications encryption devices	9	6	1.11	6.09	2
	B0088. Troubleshoot or repair communications encryption devices	9	7	.79	6.62	2
IV.3.d.	Given an MT-1 computer and instructional materials, perform transponder verification procedures IAW written instructions (IV.3. Annunciator Functional Testing and Troubleshooting)					
Tasks	B0071. Perform PMIs on communications encryption devices	13	13	2.32	4.78	7
	B0086. Perform software configurations on computer-based annunciators	12	15	2.79	6.63	7

*Mean TE Rating = 2.01; Standard Deviation = 1.46; High TE = 3.47

**Mean TD Rating = 5.00; Standard Deviation = 1.00; High TD = 6.00

***ATI = Automated Training Indicator is training decision value for resident training (18 = high; 1 = low)

TABLE A23

EXAMPLES OF BTVEM POI (FT MEADE) OBJECTIVES NOT SUPPORTED BY SURVEY DATA
(LESS THAN 30% MEMBERS PERFORMING)

UNIT	LEARNING OBJECTIVE	PERCENT MEMBERS PERFORMING		TNG EMP*	TSK DIF**	ATI***
		1ST ENL (N=94)	3- LVL (N=72)			
I.3.1.	Analog video signal (I.3. Basic Principles of Television/Radio)					
Tasks	E0168. Align video camera circuits	27	24	4.26	6.39	11
	F0183. Align pulse or video DAS	14	11	2.68	6.07	7
	F0189. Align timing and phasing of studio systems, such as video switchers, character generators, or still store generators	20	15	3.47	6.52	11
II.1.1.	Identify principles using block diagrams (II.1. Monitors and Receivers, Monitor Operations)					
Tasks	C0103. Align monitor or receiver audio circuits	19	18	3.84	5.70	11
	C0104. Align monitor or receiver deflection or convergence circuits	11	10	3.74	6.28	11
	C0105. Align monitor or receiver high-voltage or low-voltage circuits	14	14	4.11	6.26	11
	C0106. Align monitor or receiver video circuits	15	18	4.32	6.60	11
	C0107. Align receiver intermediate frequency (IF) or radio frequency (RF) circuits	7	7	3.00	6.61	7

*Mean TE Rating = 2.01; Standard Deviation = 1.46; High TE = 3.47

**Mean TD Rating = 5.00; Standard Deviation = 1.00; High TD = 6.00

***ATI = Automated Training Indicator is training decision value for resident training (18 = high; 1 = low)

TABLE A24

TASKS PERFORMED BY 30% OR MORE MEMBERS
BUT NOT REFERENCED TO ANY BTVEM POI (FT MEADE) OBJECTIVE

TASKS		TNG EMP*	PERCENT MEMBERS PERFORMING		TSK DIF**	ATI***
			1ST ENL (N=94)	3- LVL (N=72)		
A0001	Adjust camera body electronic or mechanical components	3.32	48	43	5.77	15
E0174	Perform PMIs on video camera systems	4.63	38	32	5.18	12

*Mean TE Rating = 2.01; Standard Deviation = 1.46; High TE = 3.47

**Mean TD Rating = 5.00; Standard Deviation = 1.00; High TD = 6.00

***ATI = Automated Training Indicator is training decision value for resident training (18 = high; 1 = low)

TABLE A25

PERCENT TIME SPENT ON DUTIES BY AFSC 2E1X4 **MAJCOM** GROUPS

	ACC (N=54)	AETC (N=34)	AFNEWS (N=34)	USAFE (N=26)	ANG (N=26)	AMC (N=23)
<u>DUTIES</u>						
A PERFORMING GENERAL MAINTENANCE ACTIVITIES	23	23	16	21	26	25
B PERFORMING INTRUSION DETECTION SYSTEMS MAINTENANCE ACTIVITIES	26	2	*	21	7	9
C PERFORMING MONITOR, RECEIVER, AND PROJECTION MAINTENANCE ACTIVITIES	3	7	2	3	5	4
D PERFORMING AUDIO SYSTEM MAINTENANCE ACTIVITIES	3	13	11	1	8	4
E PERFORMING VIDEO CAMERA SYSTEM MAINTENANCE ACTIVITIES	5	8	5	1	3	7
F PERFORMING STUDIO, PRODUCTION, AND AUXILIARY EQUIPMENT MAINTENANCE ACTIVITIES	6	23	16	1	4	10
G PERFORMING PHOTOGRAPHIC PROCESSING EQUIPMENT MAINTENANCE ACTIVITIES	*	*	0	*	5	*
H PERFORMING PHOTOGRAPHIC SUPPORT EQUIPMENT MAINTENANCE ACTIVITIES	*	1	0	*	7	*
I PERFORMING PRINTER SYSTEM MAINTENANCE ACTIVITIES	*	*	0	*	1	1
J PERFORMING RADIO FREQUENCY (RF) SYSTEM MAINTENANCE ACTIVITIES	*	2	6	*	7	*
K PERFORMING MICROWAVE AND SATELLITE SYSTEM MAINTENANCE ACTIVITIES	1	*	3	2	1	2
L PERFORMING DEPLOYABLE SHELTERIZED SYSTEMS-FILM (DSS-F) MAINTENANCE ACTIVITIES	*	*	0	*	2	*
M PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	4	2	5	9	3	4
N PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	7	5	10	11	9	12
O PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES	1	1	2	2	4	1
P PERFORMING TRAINING ACTIVITIES	6	4	5	10	3	6
Q PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	13	11	19	19	5	14

* Indicates less than 1%

Note: Columns may not add up to 100% due to rounding

TABLE A25 (CONT.)

PERCENT TIME SPENT ON DUTIES BY AFSC 2E1X4 **MAJCOM** GROUPS

<u>DUTIES</u>	PACAF (N=20)	AFSPC (N=20)	AFOFA (N=12)	AFMC (N=11)	USEUC (N=5)	AFSOC (N=2)
A PERFORMING GENERAL MAINTENANCE ACTIVITIES	23	24	5	13	6	15
B PERFORMING INTRUSION DETECTION SYSTEMS MAINTENANCE ACTIVITIES	15	22	0	13	*	*
C PERFORMING MONITOR, RECEIVER, AND PROJECTION MAINTENANCE ACTIVITIES	4	5	7	1	*	1
D PERFORMING AUDIO SYSTEM MAINTENANCE ACTIVITIES	6	3	7	1	0	4
E PERFORMING VIDEO CAMERA SYSTEM MAINTENANCE ACTIVITIES	2	8	4	2	*	6
F PERFORMING STUDIO, PRODUCTION, AND AUXILIARY EQUIPMENT MAINTENANCE ACTIVITIES	3	10	11	*	0	4
G PERFORMING PHOTOGRAPHIC PROCESSING EQUIPMENT MAINTENANCE ACTIVITIES	*	0	*	0	13	10
H PERFORMING PHOTOGRAPHIC SUPPORT EQUIPMENT MAINTENANCE ACTIVITIES	1	*	0	0	34	1
I PERFORMING PRINTER SYSTEM MAINTENANCE ACTIVITIES	*	0	0	*	6	4
J PERFORMING RADIO FREQUENCY (RF) SYSTEM MAINTENANCE ACTIVITIES	4	*	6	0	0	1
K PERFORMING MICROWAVE AND SATELLITE SYSTEM MAINTENANCE ACTIVITIES	1	*	3	0	0	*
L PERFORMING DEPLOYABLE SHELTERIZED SYSTEMS-FILM (DSS-F) MAINTENANCE ACTIVITIES	*	*	0	0	0	*
M PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	6	4	1	9	11	6
N PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	10	7	3	15	9	15
O PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES	2	1	*	2	0	1
P PERFORMING TRAINING ACTIVITIES	6	5	35	11	7	1
Q PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	17	9	19	32	13	29

* Indicates less than 1%

Note: Columns may not add to 100% due to rounding

TABLE A26

**JOB SATISFACTION INDICATORS FOR IDENTIFIED JOB GROUPS
(PERCENT MEMBERS RESPONDING)**

	INTRUSION DETECTION SYSTEMS MAINTENANCE IJ (STG 20)	VISUAL IMAGERY MAINTENANCE CLUSTER (STG 23)	VISUAL IMAGERY MAINTENANCE CLUSTER				
			Maintenance Support Job (STG 52)	Visual Imagery Maintenance Job (STG 47)	VIID Guard Job (STG 43)	Video Production Maintenance Job (STG 44)	Broadcast Maintenance Job (STG 54)
<u>EXPRESSED JOB INTEREST</u>							
INTERESTING	54	79	56	83	93	82	76
SO-SO	25	10	0	0	7	18	13
DULL	21	11	44	17	0	0	11
<u>PERCEIVED USE OF TALENTS</u>							
EXCELLENT TO PERFECT	9	24	0	33	21	9	31
FAIRLY WELL TO VERY WELL	68	59	44	33	64	73	58
NONE TO VERY LITTLE	23	17	56	33	14	18	11
<u>PERCEIVED USE OF TRAINING</u>							
EXCELLENT TO PERFECT	18	16	0	0	14	18	20
FAIRLY WELL TO VERY WELL	60	64	44	83	57	45	69
NONE TO VERY LITTLE	23	20	56	17	29	36	11
<u>SENSE OF ACCOMPLISHMENT FROM JOB</u>							
SATISFIED	60	66	33	67	71	55	73
NEUTRAL	19	16	11	0	21	36	13
DISSATISFIED	21	18	56	33	7	9	15
<u>REENLISTMENT INTENTIONS</u>							
YES OR PROBABLY YES	53	58	44	50	71	82	51
NO OR PROBABLY NO	47	27	44	50	14	18	27
WILL RETIRE	0	15	11	0	14	0	22

Note: Columns may not add up to 100% due to rounding

TABLE A26 (CONT.)

**JOB SATISFACTION INDICATORS FOR IDENTIFIED JOB GROUPS
(PERCENT MEMBERS RESPONDING)**

				MANAGEMENT/SUPERVISION CLUSTER		
				NCOIC Intrusion Detection Systems Maintenance Job (STG 97)	Visual Imagery Maintenance Supervision Job (STG 81)	Maintenance Support Management Job (STG 52)
	PHOTOGRAPHIC MAINTENANCE IJ (STG 32)	BTVEM INSTRUCTION IJ (STG 22)	MANAGEMENT/ SUPERVISION CLUSTER (STG 36)			
<u>EXPRESSED JOB INTEREST</u>						
INTERESTING	62	100	61	60	40	67
SO-SO	8	0	30	33	40	17
DULL	31	0	9	7	20	17
<u>PERCEIVED USE OF TALENTS</u>						
EXCELLENT TO PERFECT	15	20	11	9	0	17
FAIRLY WELL TO VERY WELL	46	80	67	67	100	58
NONE TO VERY LITTLE	38	0	23	23	0	25
<u>PERCEIVED USE OF TRAINING</u>						
EXCELLENT TO PERFECT	15	20	8	7	0	8
FAIRLY WELL TO VERY WELL	38	80	58	58	60	50
NONE TO VERY LITTLE	46	0	35	35	40	42
<u>SENSE OF ACCOMPLISHMENT FROM JOB</u>						
SATISFIED	62	100	55	58	20	58
NEUTRAL	0	0	20	23	20	17
DISSATISFIED	38	0	26	19	60	25
<u>REENLISTMENT INTENTIONS</u>						
YES OR PROBABLY YES	46	60	48	53	60	17
NO OR PROBABLY NO	31	0	5	2	0	8
WILL RETIRE	23	40	47	44	40	75

Note: Columns may not add up to 100% due to rounding

TABLE A27

**COMPARISON OF JOB SATISFACTION INDICATORS FOR AFSC 2E1X4 ACTIVE DUTY
AND COMPARATIVE SAMPLE GROUP
(PERCENT MEMBERS RESPONDING)**

	1-48 MONTHS' TAFMS		49-96 MONTHS' TAFMS		97+ MONTHS' TAFMS	
	2003 2E1X4 (N=94)	COMP SAMPLE (N=238)	2003 2E1X4 (N=29)	COMP SAMPLE (N=317)	2003 2E1X4 (N=122)	COMP SAMPLE (N=675)
<u>EXPRESSED JOB INTEREST</u>						
INTERESTING	55	64	52	62	72	72
SO-SO	19	19	28	19	18	18
DULL	26	17	21	20	10	11
<u>PERCEIVED USE OF TALENTS</u>						
EXCELLENT TO PERFECT	6	12	10	12	21	17
FAIRLY WELL TO VERY WELL	63	66	55	63	61	66
NONE TO VERY LITTLE	31	22	34	24	18	17
<u>PERCEIVED USE OF TRAINING</u>						
EXCELLENT TO PERFECT	11	18	7	14	16	13
FAIRLY WELL TO VERY WELL	64	63	48	57	58	63
NONE TO VERY LITTLE	26	19	45	29	26	24
<u>SENSE OF ACCOMPLISHMENT FROM JOB</u>						
SATISFIED	56	61	48	60	65	67
NEUTRAL	15	15	24	15	15	12
DISSATISFIED	29	24	28	24	20	21
<u>REENLISTMENT INTENTIONS</u>						
YES OR PROBABLY YES	39	52	66	64	52	61
NO OR PROBABLY NO	59	47	34	36	5	6
WILL RETIRE	2	1	0	0	43	33

Note: Comparative sample of two career ladders surveyed in the last 12 months - AFSC 2E1X2 (Meteorological and Navigation Systems) and AFSC 2E1X3 (Ground Radio Communications).

Note: Columns may not add up to 100% due to rounding

TABLE A28

JOB SATISFACTION INDICATORS FOR
AD AND ANG MEMBERS
(PERCENT MEMBERS RESPONDING)

	AD (N=245)	ANG (N=26)
<u>EXPRESSED JOB INTEREST</u>		
INTERESTING	63	92
SO-SO	20	4
DULL	17	4
<u>PERCEIVED USE OF TALENTS</u>		
EXCELLENT TO PERFECT	14	23
FAIRLY WELL TO VERY WELL	61	65
NONE TO VERY LITTLE	25	12
<u>PERCEIVED USE OF TRAINING</u>		
EXCELLENT TO PERFECT	13	15
FAIRLY WELL TO VERY WELL	59	54
NONE TO VERY LITTLE	28	31
<u>SENSE OF ACCOMPLISHMENT FROM JOB</u>		
SATISFIED	60	69
NEUTRAL	16	19
DISSATISFIED	24	12

TABLE A29

COMPARISON OF JOB SATISFACTION INDICATORS
BETWEEN CURRENT AND 2000 SURVEYS
(PERCENT MEMBERS RESPONDING)

	1-48 MONTHS' TAFMS		49-96 MONTHS' TAFMS		97+ MONTHS' TAFMS	
	2003 2E1X4 (N=94)	2000 2E1X4 (N=60)	2003 2E1X4 (N=29)	2000 2E1X4 (N=55)	2003 2E1X4 (N=122)	2000 2E1X4 (N=201)
<u>EXPRESSED JOB INTEREST</u>						
INTERESTING	55	55	52	68	72	73
SO-SO	19	17	28	16	18	18
DULL	26	28	21	16	10	9
<u>PERCEIVED USE OF TALENTS</u>						
EXCELLENT TO PERFECT	6	NA	10	NA	21	NA
FAIRLY WELL TO VERY WELL	63	60	55	78	61	80
NONE TO VERY LITTLE	31	40	34	22	18	20
<u>PERCEIVED USE OF TRAINING</u>						
EXCELLENT TO PERFECT	11	NA	7	NA	16	NA
FAIRLY WELL TO VERY WELL	64	63	48	75	58	68
NONE TO VERY LITTLE	26	37	45	25	26	32
<u>SENSE OF ACCOMPLISHMENT FROM JOB</u>						
SATISFIED	56	55	48	73	65	70
NEUTRAL	15	20	24	11	15	12
DISSATISFIED	29	25	28	16	20	18
<u>REENLISTMENT INTENTIONS</u>						
YES OR PROBABLY YES	39	45	66	53	52	58
NO OR PROBABLY NO	59	55	34	47	5	11
WILL RETIRE	2	0	0	0	43	31

Note: Columns may not add up to 100% due to rounding

Note: "NA" indicates data not available. The 2000 study combined the "excellent to perfect" and "fairly well to very well" responses.

TABLE A30

**COMPARISON OF REENLISTMENT FACTORS BY TAFMS GROUPS –
PERCENT OF RESPONDENTS SELECTING EACH FACTOR AND
AVERAGE SCORE AMONG THOSE SELECTING EACH FACTOR**

31 FACTORS LISTED IN ORDER OF APPEARANCE IN SURVEY Scale: 1 = Slight Influence; 2 = Moderate Influence; 3 = Strong Influence	1-48 MONTHS' TAFMS (N=37)		49-96 MONTHS' TAFMS (N=19)		97+ MONTHS' TAFMS (N=63)	
	Percent Selecting	Average	Percent Selecting	Average	Percent Selecting	Average
MILITARY LIFESTYLE	38	2.50	58	2.09	57	2.03
PAY AND ALLOWANCES	46	2.35	58	2.73	51	2.59
BONUS OR SPECIAL PAY	35	2.15	31	2.83	11	2.29
RETIREMENT BENEFITS	54	2.60	53	2.50	76	2.81
MILITARY-RELATED EDU & TRNG OPPORTUNITIES	68	2.56	63	1.92	52	2.18
OFF-DUTY EDU OR TRAINING OPPORTUNITIES	57	2.48	53	2.60	48	2.23
MEDICAL/ DENTAL CARE FOR AD MEMBER	54	2.55	63	2.42	54	2.41
MEDICAL/ DENTAL CARE FOR FAMILY MEMBERS	41	2.73	53	2.50	44	2.54
BASE HOUSING	16	1.83	16	1.67	22	1.86
BASE SERVICES	22	2.12	37	1.86	27	1.71
CHILDCARE NEEDS	3	3.00	10	2.00	10	1.83
SPOUSE'S CAREER	3	1.00	16	2.33	14	2.11
CIVILIAN JOB OPPORTUNITIES	19	2.14	21	2.50	20	2.58
EQUAL EMPLOYMENT OPPORTUNITIES	8	1.67	10	2.00	6	2.00
NUMBER OF PCS MOVES	14	2.40	16	2.67	16	1.90
LOCATION OF PRESENT ASSIGNMENT	22	1.75	42	2.38	30	2.47
NUMBER/DURATION OF TDYS OR DEPLOYMENTS	14	2.20	21	2.75	23	2.14
WORK SCHEDULE	35	2.23	32	2.50	31	1.95
ADDITIONAL DUTIES	27	1.70	27	1.80	13	1.50
JOB SECURITY	70	2.54	63	2.67	59	2.70
ENLISTED EVALUATION SYSTEM	3	3.00	27	1.80	15	1.44
PROMOTION OPPORTUNITIES	27	2.60	37	2.43	33	2.60
TRAINING/EXPERIENCE OF UNIT PERSONNEL	25	1.67	32	1.83	14	2.00
UNIT MANNING	6	2.50	16	1.33	11	1.43
UNIT RESOURCES	8	2.33	11	1.00	7	1.75
UNIT READINESS	3	1.00	5	1.00	9	1.60
RECOGNITION OF EFFORTS	17	2.50	32	1.83	25	1.88
ESPRIT DE CORPS/MORALE	27	2.40	37	2.29	38	2.21
LEADERSHIP OF IMMEDIATE SUPERVISOR	27	1.90	21	2.00	24	2.00
LEADERSHIP AT UNIT LEVEL	10	1.50	16	1.67	24	1.87
SENIOR AIR FORCE LEADERSHIP	9	2.00	15	2.00	16	1.90

TOP 5 REASONS FOR MEMBERS REENLISTING BY TAFMS GROUPS

1-48 MONTHS' TAFMS (N=37)	49-96 MONTHS' TAFMS (N=19)	97+ MONTHS' TAFMS (N=63)
JOB SECURITY	JOB SECURITY	RETIREMENT BENEFITS
MILITARY-RELATED EDU & TRNG OPPORTUNITIES	MEDICAL/ DENTAL CARE FOR AD MEMBER	JOB SECURITY
OFF-DUTY EDU OR TRAINING OPPORTUNITIES	MILITARY-RELATED EDU & TRNG OPPORTUNITIES	MILITARY LIFESTYLE
RETIREMENT BENEFITS	PAY AND ALLOWANCES	MEDICAL/ DENTAL CARE FOR AD MEMBER
MEDICAL/ DENTAL CARE FOR AD MEMBER	MILITARY LIFESTYLE	MILITARY-RELATED EDU & TRNG OPPORTUNITIES

TABLE A31

**COMPARISON OF SEPARATION FACTORS BY TAFMS GROUPS –
PERCENT OF RESPONDENTS SELECTING EACH FACTOR AND
AVERAGE SCORE AMONG THOSE SELECTING EACH FACTOR**

31 FACTORS LISTED IN ORDER OF APPEARANCE IN SURVEY Scale: 1 = Slight Influence; 2 = Moderate Influence; 3 = Strong Influence	1-48 MONTHS' TAFMS (N=55)		49-96 MONTHS' TAFMS (N=10)		97+ MONTHS' TAFMS (N=6)	
	Percent Selecting	Average	Percent Selecting	Average	Percent Selecting	Average
MILITARY LIFESTYLE	66	2.25	70	2.14	50	1.67
PAY AND ALLOWANCES	52	2.14	50	2.60	67	3.00
BONUS OR SPECIAL PAY	22	1.58	40	2.50	33	3.00
RETIREMENT BENEFITS	10	2.00	30	3.00	17	3.00
MILITARY-RELATED EDU & TRNG OPPORTUNITIES	33	1.67	30	2.00	17	3.00
OFF-DUTY EDU OR TRAINING OPPORTUNITIES	31	2.18	30	2.33	34	2.50
MEDICAL/ DENTAL CARE FOR AD MEMBER	25	1.57	20	1.00	17	3.00
MEDICAL/ DENTAL CARE FOR FAMILY MEMBERS	14	1.75	20	2.00	17	3.00
BASE HOUSING	16	2.11	30	1.67	33	3.00
BASE SERVICES	26	1.60	30	1.67	17	3.00
CHILDCARE NEEDS	11	1.83	10	3.00	17	3.00
SPOUSE'S CAREER	9	2.60	40	2.00	17	3.00
CIVILIAN JOB OPPORTUNITIES	42	2.65	60	2.67	50	3.00
EQUAL EMPLOYMENT OPPORTUNITIES	9	1.40	30	2.00	17	3.00
NUMBER OF PCS MOVES	9	2.40	30	2.33	17	3.00
LOCATION OF PRESENT ASSIGNMENT	35	2.05	50	2.20	34	2.00
NUMBER/DURATION OF TDYS OR DEPLOYMENTS	6	2.00	30	2.33	50	2.67
WORK SCHEDULE	25	1.86	30	1.67	34	2.50
ADDITIONAL DUTIES	32	1.50	20	2.00	33	3.00
JOB SECURITY	15	1.00	20	1.00	17	3.00
ENLISTED EVALUATION SYSTEM	31	2.18	40	2.00	17	3.00
PROMOTION OPPORTUNITIES	27	2.07	20	3.00	50	2.67
TRAINING/EXPERIENCE OF UNIT PERSONNEL	29	2.00	20	2.50	34	2.50
UNIT MANNING	15	2.75	0	0	34	2.50
UNIT RESOURCES	16	2.11	10	1.00	17	3.00
UNIT READINESS	4	1.00	10	3.00	17	3.00
RECOGNITION OF EFFORTS	36	2.20	20	3.00	17	3.00
ESPRIT DE CORPS/MORALE	38	2.24	30	1.67	17	3.00
LEADERSHIP OF IMMEDIATE SUPERVISOR	28	2.44	20	2.50	17	3.00
LEADERSHIP AT UNIT LEVEL	20	2.18	0	0	17	3.00
SENIOR AIR FORCE LEADERSHIP	13	2.57	10	3.00	17	3.00

TOP 5 REASONS FOR MEMBERS SEPARATING BY TAFMS GROUPS

1-48 MONTHS' TAFMS (N=55)	49-96 MONTHS' TAFMS (N=10)	97+ MONTHS' TAFMS (N=6)
MILITARY LIFESTYLE	MILITARY LIFESTYLE	PAY AND ALLOWANCES
PAY AND ALLOWANCES	CIVILIAN JOB OPPORTUNITIES	CIVILIAN JOB OPPORTUNITIES
CIVILIAN JOB OPPORTUNITIES	PAY AND ALLOWANCES	NUMBER/DURATION OF TDYS OR DEPLOYMENTS
ESPRIT DE CORPS/MORALE	LOCATION OF PRESENT ASSIGNMENT	PROMOTION OPPORTUNITIES
RECOGNITION OF EFFORTS	BONUS OR SPECIAL PAY	MILITARY LIFESTYLE