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AIR WEAPONS CONTROLLER AND INTERCEPT DIRECTOR AIR FORCE SPECIAL--ETC(U)
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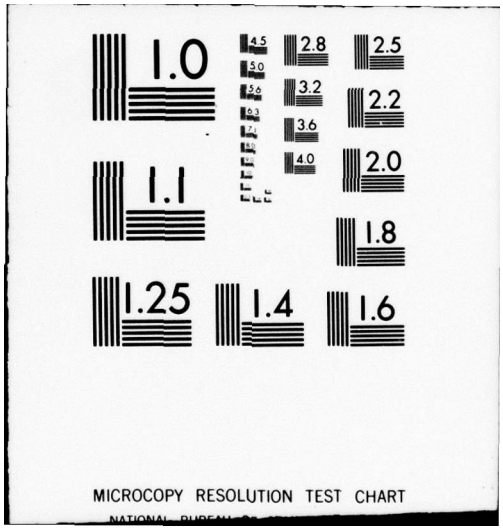
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(10) Jerry M. Barucky

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AIR WEAPONS CONTROLLER AND INTERCEPT DIRECTOR AIR FORCE SPECIALTIES

AFSs 174XA/B/C/D/E/F/G and 276X2.

AFPTs 90-174-335 and 90-276-282

(11) MARCH 1979

(12) 84p.

OCCUPATIONAL SURVEY BRANCH
USAF OCCUPATIONAL MEASUREMENT CENTER
RANDOLPH AFB TEXAS 78148

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PREFACE

This report presents the results of a detailed Air Force Occupational Survey of the Air Weapons Controller and Intercept Director Air Force Specialties (AFS's 174XA/B/C/D/E/F/G and AFSC 276X2). The project was directed by USAF Program Technical Training, Volume 2, dated August 1976. Authority for conducting occupational surveys is contained in AFR 35-2. Computer outputs from which this report was produced are available for use by operating and training officials.

Captain Jerry M. Barucky developed the survey instrument, analyzed the survey data, and wrote the final report. This report has been reviewed and approved by Mr. Paul N. DiTullio, Technical Advisor of the Officer Survey and Management Applications Section, Occupational Survey Branch USAF Occupational Measurement Center, Randolph AFB, Texas 78148.

Computer programs for analyzing the occupational data were designed by Dr. Raymond E. Christal, Occupational and Manpower Research Division, Air Force Human Resources Laboratory (AFHRL), and were written by the Project Analysis and Programming Branch, Computational Sciences Division, AFHRL.

Copies of this report are available to air staff sections, major commands, and other interested training and management personnel upon request to the USAF Occupational Measurement Center, attention of the Chief, Occupational Survey Branch (OMY), Randolph AFB, Texas 78148.

This report has been reviewed and is approved.

BILLY C. McMASTER, Colonel, USAF
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SUMMARY OF RESULTS

1. Survey Coverage: Task inventory booklets were administered during the period November 1977 through March 1978 to air weapons controllers in DAFS 174X and to those enlisted personnel in DAFSC 276X2 who function as enlisted weapons controllers or who directly supervise enlisted weapons controllers. Survey results are based on responses from 626 officers (59 percent of the 174X personnel assigned) and 72 enlisted personnel (27 percent of all 276X2 personnel assigned).

2. DAFS 174X Shred Comparisons: Major differences in job performance between respondents in various DAFS 174X shreds are most influenced by the type of weapons control equipment used and also by the type or variety of missions performed. In addition, various shreds are characterized by notable responses in such areas as experience level, percent time actually controlling aircraft, and job satisfaction.

3. DAFSC 276X2 Comparisons: Task performance comparisons between enlisted weapons controllers (DAFSC 27632/27672) and DAFSC 174XB personnel who control aircraft show a great similarity between these two groups. In addition, the enlisted controllers reflect more positive job satisfaction responses than do either their officer counterparts or the average enlisted personnel in all occupational surveys conducted in 1977. Skill level comparisons indicate that 3-skill level respondents and 7-skill level respondents are primarily technicians, spending 85 and 73 percent of their job time respectively on tasks related to controlling aircraft or to air surveillance. Conversely, 9-skill level respondents are primarily managers, spending 74 percent of their time on managerial tasks.

4. Job Utilization Pattern: Analysis of the job utilization pattern for DAFS 174X and DAFSC 276X2 respondents reveals 15 major job clusters falling loosely in four general categories. Six clusters of weapons controllers relating to the various DAFS 174X shreds comprise one category. Three clusters of weapons controllers whose jobs entail various special requirements such as mobility officer or Air National Guard Advisory duties comprise a second category. A third category consists of five clusters of respondents whose jobs consist primarily of "staff" activities such as developing training, supervising sections, or planning programs or special projects. A final cluster of air surveillance/ ECCM personnel makes up the fourth catagory.

5. Special Group Analysis: Comparisons of certain groups of respondents based on differences in background variables produced the following conclusions:

a. Commissioned Service Time: DAFS 174X respondents spent an increasing proportion of their time on managerial tasks as their amount of commissioned service time increased. The percentage of respondents assigned to positions at higher organizational levels increased dramatically after six years of commissioned service. The percentage of

positive job satisfaction responses declined for respondents in the 24-72 months commissioned time group, then increased continually for respondents who had more than 72 months commissioned time.

b. Male/Female: Female 174X respondents seemed concentrated more in air defense operations, reported less involvement with managerial tasks, and indicated fewer positive job satisfaction responses than did their male counterparts with the same amount of commissioned service time.

c. Rated/Non-Rated: Rated DAFS 174X respondents with 49-120 months commissioned service time reported slightly more involvement with controlling tasks, somewhat lower job satisfaction responses, and were less likely to be assigned to units at higher organizational levels than their non-rated counterparts.

d. Regular/Reserve Comparison: DAFS 174X respondents with a regular commission reported more involvement with managerial tasks and with certain supervisory positions than did their counterparts with a reserve commission. In addition, a greater percentage of the regular 174X respondents reported working in positions at higher organizational levels and a greater percentage reflected positive job satisfaction responses.

e. Advanced Degree/Baccalaureate Degree: A comparison of DAFS 174X respondents with advanced degrees and DAFS 174X respondents with baccalaureate degrees showed relatively little difference in task performance and duty assignment and some differences in job satisfaction responses. Perceptions of the usefulness of the degree to present job were more favorable among more experienced 174X respondents.

f. Prior Service/Non-Prior Service: Approximately 30 percent of DAFS 174X respondents with 1-48 months commissioned service reported more than two years of active duty service prior to commissioning. Although a much greater percentage of these respondents than non-prior service respondents were assigned to ADCOM, there was no major difference in the types of tasks performed other than that occasioned by the ADCOM specific equipment.

6. AFR 36-1, AFR 39-1 Specialty Descriptions: The AFR 36-1 Specialty Description provides a general but accurate picture of the major functions of DAFS 174X personnel. However, the AFR 39-1 Specialty Description of the duties and responsibilities for DAFSC 27632/27672 personnel is much more general and could be expanded to provide a more detailed and helpful description.

7. Training Concerns: The system specific nature of the Air Weapons Controller specialties fully supports the present channelization of training after a short, basic course. However, analysis of course training documents indicates that further channelization of the ECCM Operations Officer course may be desirable so that D shred personnel

who will be assigned to either the SAGE environment or the E-3A system would not have to be taught all of the material that pertains to both areas. Finally, the limited use of the computer-assist capabilities by personnel working on the 407L or 485L equipment may also be a point that merits the attention of those who train DAFSC 174X2F personnel.

OCCUPATIONAL SURVEY REPORT
AIR WEAPONS CONTROLLER AND INTERCEPT DIRECTOR AIR FORCE SPECIALTIES
(AFS's 174XA/B/C/D/E/F/G AND 276X2)

INTRODUCTION

This is a report of an occupational survey of the Air Weapons Controller and Intercept Director Air Force Specialties (AFS's 174XA/B/C/D/E/F/G and AFSC 276X2) completed by the Occupational Survey Branch, USAF Occupational Measurement Center, in December 1978. This is the first occupational survey conducted of these Air Force Specialties.

The impetus for this combined officer-enlisted survey came from discussions with AF Military Personnel Center Classification Section personnel (MPCRPQ). Factors influencing the scope of analysis and specific areas of consideration were discussions with officer assignment personnel in MPC Palace Scope and questions raised at Air Weapons Controller Symposia and Conferences in 1975, 1976, and 1977.

This report describes (1) development and administration of the survey instrument; (2) comparative summaries of the job performance and general background characteristics of officers grouped by shred and airmen assigned as (or supervising) enlisted weapons controllers; (3) comparative summaries of the job performance and background characteristics of respondents grouped on the basis of similarity of job performance; and (4) comparisons of job performance and background responses between specific special groups of incumbents, such as male/female or rated/non-rated personnel.

INVENTORY DEVELOPMENT

The data collection instrument for this occupational survey was USAF Job Inventory AFPT's 90-174-335 and 90-276-282. The instrument was developed through research of publications and directives and personal interviews with 55 subject matter specialists in 15 units at 10 bases. In addition, the instrument was field reviewed by 83 experienced air weapons control incumbents and by personnel responsible for weapons controller training at three training schools. This process resulted in a job inventory of 987 tasks grouped under 20 duty headings.

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SURVEY ADMINISTRATION

During the period November 1977 through March 1978, consolidated base personnel offices in operational units worldwide administered the inventory booklets to officer job incumbents holding DAFS's 174XA/B/C/D/E/F or G and to enlisted incumbents holding DAFSC's 27632, 27672, or 27692. Because of the combination of 3 career ladders at the 9-skill level, surveys were mailed only to those DAFSC 27692 incumbents who were enlisted weapons controllers or who supervised enlisted controllers.

These job incumbents were selected from a computer generated mailing list obtained from personnel data tapes maintained by the Air Force Human Resources Laboratory (AFHRL). Each individual who completed the inventory first completed an identification and biographical information section, then checked each task performed in his current job.

After checking all tasks performed, each incumbent then rated each of these tasks on a nine-point scale showing the relative amount of time spent on that task as compared to all other tasks checked. The ratings ranged from one (very-small amount time spent) through five (about-average time spent) to nine (very-large amount time spent). To determine relative time spent for each task checked by a respondent, each of the incumbent's ratings is mathematically converted to a percentage of the total time spent on the job. This procedure provides for a basis for comparing tasks not only in terms of percent members performing but also in terms of average percent time spent.

SURVEY SAMPLE

Table 1 reflects the percentage distribution, by DAFSC group, of assigned personnel in the career field as of December 1977. Also reflected is the distribution, by DAFSC group, of incumbents in the final survey sample. The 626 respondents in DAFS 174X represent 59 percent of the total DAFS population of 1060 members and appears to be a representative sample of each DAFS group.

Table 2 reflects the percentages of DAFSC 276X2 personnel assigned in each skill level as of October 1977. Obvious differences between the percentages of those assigned and the percentages in the sample reflect the intention to limit the survey to those 9-skill level personnel who were enlisted weapons controllers or who supervised enlisted weapons controllers.

TABLE 1

PERCENTAGE OF DAFS 174X PERSONNEL ASSIGNED IN EACH SHREDOUT AND PRESENT IN SURVEY SAMPLE

174X SHREDOUTS	ASSIGNED	SAMPLE
A	35	33
B	22	21
C	4	6
D	7	9
E	2	2
F	23	22
G	7	7

TABLE 2

PERCENTAGE OF DAFSC 276X2 PERSONNEL ASSIGNED AT EACH SKILL LEVEL AND PRESENT IN SURVEY SAMPLE

276X2 SKILL LEVEL	ASSIGNED	SAMPLE*
27632	11	15
27672	15	47
27692	74	38

* Percentages of DAFSC 276X2 personnel in the sample do not closely resemble the percentages assigned because the survey of DAFSC 27692 personnel was limited to those who were enlisted weapons controllers or who directly supervised enlisted weapons controllers.

DAFS 174X SHRED COMPARISONS

Since the 174X career field is shredded on the type of air weapon control system utilized, it is no surprise that the major differences in job performance are most heavily influenced by the fact that a controller may be controlling missions on manual equipment or on one of the various types of automated equipment. However, beyond the equipment specific tasks, a number of other differences exist, both in task performance and in background characteristics of the various incumbents in these shreds. The narrative and tables that follow will highlight some of the differences and also some of the similarities among the shreds.

174X A SHRED

Using manual equipment and involved in a variety of mission types, the 208 respondents from the A shred perform the most diverse variety of tasks in the 174X career field. They use primarily the UPA-35 or UPA-48 consoles, and could be performing an air defense mission in Alaska, working in forward air control posts (FACP) in TAC or USAFE, handling range safety for ADCOM, or controlling "aggressor" aircraft for TAC or PACAF. These A shred respondents averaged the largest numbers of tasks performed (109) of any of the shreds, but in most other respects their job characteristics were similar to most of the other shred respondents: approximately 72 percent of the A-shred respondents stated that their job requires them to control aircraft, and 46 percent of their total job time is spent performing various controlling tasks.

A shred respondents engage in a wide variety of mission types, concentrating mostly on tactical intercepts, tactical fluid control, close air support, and aerial refueling. However, Table 3 illustrates that they spend less time than personnel in other shreds actually utilizing the control center consoles, as only 42 percent spend more than 5 hours per week on the equipment and only 10 percent spend more than 20 hours per week.

174X B SHRED

Assigned primarily to ADCOM and working with the 416 L Semi-Automatic Ground Environment (SAGE) system, the 109 respondents from the B shred perform a very specific air defense function. These respondents average relatively few tasks (72) performed, but as shown in Table 4, spend a greater percentage of time (68 percent) than the respondents in most of the other shreds on tasks from the controlling related duties. In fact, DAFSC 1741 B respondents spend 84 percent of their time on tasks in the controlling related duties. It is no surprise then that, as Table 3 shows, B shred respondents average more hours per week on control center consoles than do respondents in

all but the E shred. This control time seems to be concentrated primarily on tactical intercepts and aerial refueling missions.

The respondents in the B shred report the least experience (average of 37 months in the career field) of any of the shreds in the 174X career field; 50 percent are second lieutenants and 45 percent are in the entry-level DAFSC (1741). In terms of job satisfaction indicators, a relatively high percentage (78 percent) of the B shred respondents report that their job utilizes their training at least fairly well, but their responses in other satisfaction or career intention indicators are close to average (See Table 5).

174X C SHRED

The 35 C shred respondents comprise only about 5 percent of the 174X sample, and about 95 percent of them are assigned to USAFE, working in the 412 L control system as part of the German Air Defense System. They perform an air defense function that involves both controlling aircraft and directing air surveillance. In the SAGE or BUIC systems the controlling tasks are primarily performed by B shred or E shred personnel, and the surveillance tasks are more strictly confined to members of the D shred. In the 412 L system, however, the C shred personnel are assigned to either of these areas. This dual function is also borne out by the figures in Table 4, which show that on the average, 13 percent of the C shred respondents total job time (about 4 times as much as any but the D shred) is involved with surveillance duties.

These 412L system duties apparently require a relatively large amount of on-scope time, as 43 percent of the respondents spend at least 20 hours per week on the control center consoles or equipment (Table 3). Their job also seems to involve the most supervision of any of the shreds, with 74 percent of the respondents reporting that they supervise other personnel (compared to an average of 50 percent for all DAFS 174X respondents).

Like the B shred respondents, the members of the C shred are primarily involved with tactical intercept missions and aerial refueling missions. However, unlike the B shred personnel, they are also more involved in controlling reconnaissance missions.

From a number of indicators, the C shred respondents seem least satisfied with their positions: 23 percent reported finding their job fairly dull to extremely dull (as compared to 14 percent for all the DAFS 174X respondents); 40 percent (compared to 33 percent of all DAFS 174X respondents) reported that their job utilizes their talents little or not at all; 32 percent (as compared to 21 percent of all DAFS 174X respondents) report that they definitely plan to or probably will separate from the Air Force; and 43 percent (as compared to 35 percent of all DAFS 174X respondents) report that they will try to crosstrain and stay within another career field if they remain in the military (See Table 5).

174X D SHRED

The members of the DAFSC 174X D shred do the most distinctive job of incumbents in any of the 174X shreds. The vast majority do not actually "control" aircraft, but are assigned to surveillance sections in ADCOM or TAC. Of the 58 respondents in the D shred, 62 percent are assigned to ADCOM primarily as air surveillance officers or radar inputs and countermeasures officers (RICMO) in the SAGE system; 24 percent are assigned to TAC, primarily performing air surveillance officer duties in the AWACS (E-3A) program. Table 4 shows that 39 percent of their time is spent on surveillance tasks such as directing radar site status changes, analyzing jamming information, or reporting radar degradation or malfunction conditions. As two-thirds of the respondents are supervising other personnel, a relatively large percentage of their time (23 percent) is taken up with supervisory and training tasks.

Biographically, members of the D shred possess a relatively high degree of experience, as 90 percent hold the 1744 (fully-qualified) DAFSC, and they average 70 months in the career field (compared to 55 months for all DAFS 174X personnel surveyed). Despite this relative seniority, only 16 percent are regular officers, compared to an average of 22 percent for all DAFS 174X survey respondents. Still, a comparatively high percentage of the DAFSC 174X D respondents report that their job utilizes their talents and their training at least fairly well or better (74 percent and 83 percent, respectively). Among all DAFSC 174X respondents, utilization of talents and training ratings are 67 percent and 69 percent respectively.

174X E SHRED

The smallest shred in the air weapons controller utilization field is the E shred, which had, at the time of the survey, 21 members. Of the 15 members who responded to the survey, three are assigned to AFSC as part of a range safety operation and the majority (11) are assigned to ADCOM, working in the Back-Up Interceptor Control (BUIC) system. As the 416 M (BUIC) system is an automated system designed as a backup for SAGE and is still used to train weapons controllers entering the B shred, there is a good deal of similarity between the B and E shreds. Survey respondents in both shreds concentrate primarily on air defense oriented missions, emphasizing tactical intercepts or refueling, and report much less involvement with close air support, interdiction, or reconnaissance missions. Like the B shred respondents, this group also reports both an extremely high percent of total job time spent on tasks from controlling duties (72 percent), and a great amount of time spent on the control center consoles, as all of them spend more than 5 hours a week, and 40 percent spend at least 20 hours a week utilizing the consoles and equipment.

Also like the B shred, the E shred respondents are relatively inexperienced: they average only 40 months in the 174X utilization field and 33 percent are second lieutenants. Their present function seems to offer less opportunity for supervision, since only one of the 15 respondents is a supervisor. It is interesting to note that, although none of the E shred respondents indicates definite plans to separate from the Air Force, a relatively high percentage (53 percent as compared to 35 percent for all 174X respondents) indicate that they intend to crosstrain to and remain within another career field.

174X F SHRED

Functioning as part of a tactical air control system in TAC or USAFE, most F shred members utilize the 407 L or 485 L computer-assisted consoles. A small percentage also utilize the UPA-35 or UPA-48 manual equipment. Like the members of the A shred, the 135 F shred respondents control a variety of mission types, with the greatest percentage participating in tactical intercepts, close-air support, aerial refueling, and reconnaissance missions. Another similarity to the A shred is that F shred respondents also spend a portion (4 percent) of their time performing mobility functions. Unlike the respondents in the B, C, D, and E shreds, who are engaged in a real-time air defense environment, the F shred members participate most often in a training or exercise environment. This fact may be one of the reasons that F shred respondents spend the greatest amount of time on administrative, non-controlling functions and only 40 percent of their time on tasks in controlling related duties. In addition, only 47 percent of the F shred respondents report spending more than five hours per week utilizing control center consoles or equipment.

In terms of biographical and job satisfaction data, the F shred responses seem very close to the average of the responses for all 174X shreds.

174X G SHRED

The newest shred in the 17XX career field is the G shred, which is associated almost exclusively with the newly operational Airborne Warning and Control System (AWACS) used on the E-3A (SENTRY) aircraft. At the time of the survey this system had only 2 operational aircraft and was engaged in completing the training of the first ten operational crews. Therefore, the data obtained from the 42 G shred respondents may not be totally indicative of the true role of this shred when it becomes more fully operational. More complete data about the task performance of most of the G shred members will be forthcoming from a series of special surveys of E-3A crew positions that is currently being conducted by USAFOMC personnel.

The job performance data that was received from the G shred respondents reflect their training mode. Though 90 percent of the

respondents report that they are controlling aircraft via the 411L automated system, little of this controlling had been in a live environment. In fact, although a small portion of the respondents had participated in a variety of live mission types, a much larger percentage had received only simulator experience in most of these missions at the time of the survey. In addition, only 12 percent were engaged in supervising others.

Biographically, the G shred respondents are also somewhat distinctive since they are the most experienced of any of the DAFS 174X shreds. Averaging 81 months in the career field, the G shred respondents are composed primarily of captains (86 percent) and first lieutenants (14 percent). Reflecting, perhaps, the challenge of a new system or their greater amount of service time, this group also seems the most satisfied with their present position. For example, 81 percent report that their job is at least fairly interesting; only 16 percent (less than the percentage for any other shred) report they are definitely planning to or probably will separate from the Air Force; and 14 percent (again the smallest percentage) report that they intend to crosstrain to another career field.

TABLE 3

COMPARISON BY DAFS 174X SHREDS OF HOURS SPENT ON CONTROL CENTER CONSOLES OR EQUIPMENT

AVERAGE NUMBER OF HOURS PER WEEK	PERCENT MEMBERS RESPONDING						
	A SHRED (N=208)	B SHRED (N=129)	C SHRED (N=35)	D SHRED (N=58)	E SHRED (N=15)	F SHRED (N=135)	G SHRED (N=42)
DO NOT USE CONTROL CENTER CONSOLES OR EQUIPMENT	31	10	23	28	0	23	12
USE ONE HOUR PER WEEK OR LESS	10	3	3	5	0	9	5
USE 2 TO 5 HOURS PER WEEK	16	11	14	14	0	21	28
USE 6 TO 10 HOURS PER WEEK	13	21	9	7	27	12	19
USE 11 TO 15 HOURS PER WEEK	14	23	3	3	13	10	17
USE 16 TO 20 HOURS PER WEEK	5	8	0	5	20	5	5
USE MORE THAN 20 HOURS PER WEEK	10	20	43	35	40	16	9
NOT REPORTED	1	4	5	3	0	4	5

TABLE 4

COMPARISON BY SHREDS OF DAFS 174X PERSONNEL DUTY PERFORMANCE

DUTIES	PERCENT TIME SPENT ON DUTIES						
	A SHRD (N=208)	B SHRD (N=129)	C SHRD (N=35)	D SHRD (N=58)	E SHRD (N=15)	F SHRD (N=135)	G SHRD (N=42)
A PERFORMING GENERAL COMMAND, ADMINISTRATIVE OR ADVISORY FUNCTIONS	20	10	14	19	9	20	22
B PLANNING AND PROGRAMMING	2	1	2	2	-	3	2
C PERFORMING SUPERVISORY FUNCTIONS	11	7	13	12	6	11	5
D PERFORMING TRAINING FUNCTIONS	8	5	8	11	8	11	15
T PERFORMING INSPECTION, EVALUATION, AND SYSTEMS OR EXERCISE DEVELOPMENT FUNCTIONS	5	4	3	5	1	6	3
TOTAL MANAGERIAL FUNCTIONS	46	27	40	49	24	51	47
E PREPARING OPERATIONAL CONTROL CENTER FORMS OR LOGS	2	2	3	2	3	1	1
F PERFORMING MANUAL OR GENERAL AIR CONTROL SYSTEM OPERATIONS FUNCTIONS	42	37	29	7	43	27	18
G PERFORMING WEAPONS CONTROLLING FUNCTIONS ON 416L (SAGE) SYSTEMS	1	29	-	2	4	-	1
H PERFORMING WEAPONS CONTROLLING FUNCTIONS ON 416M (BUIC) SYSTEMS	-	-	-	1	22	-	-
I PERFORMING WEAPONS CONTROLLING FUNCTIONS ON 485L OR 407L COMPUTER-ASSISTED EQUIPMENT	-	-	-	-	-	12	-
J PERFORMING WEAPONS CONTROLLING FUNCTIONS ON 412L SYSTEMS	-	-	13	-	-	-	-
P PERFORMING AIRBORNE WEAPONS CONTROLLING AND SURVEILLANCE FUNCTIONS	1	-	-	7*	-	-	32
Q PERFORMING AIR SUPPORT RADAR TEAM (ASRT) FUNCTIONS	1	-	-	-	-	-	-
TOTAL CONTROLLING FUNCTIONS	47	68	45	12*	72	40	52
K PERFORMING GENERAL SURVEILLANCE ECCM FUNCTIONS	2	2	9	25	2	2	-
L PERFORMING SURVEILLANCE AND ECCM FUNCTIONS IN 416L (SAGE) SYSTEMS	-	1	-	5	-	-	-
M PERFORMING SURVEILLANCE AND ECCM FUNCTIONS IN 416M (BUIC) SYSTEMS	-	-	-	1	1	-	-
N PERFORMING SURVEILLANCE AND ECCM FUNCTIONS IN 485L OR 407L COMPUTER-ASSISTED SYSTEMS	-	-	-	-	-	1	-
O PERFORMING SURVEILLANCE AND ECCM FUNCTIONS IN 412L SYSTEMS	-	-	4	-	-	-	-
TOTAL SURVEILLANCE/ECCM FUNCTIONS	2	3	13	38*	3	3	-
R PERFORMING COMMAND AND CONTROL CENTER FUNCTIONS	1	2	2	1	1	1	-
S PERFORMING MOBILITY FUNCTIONS	4	-	-	-	-	5	1

* D SHRED PERCENT IN SECTION P IS ADDED TO SURVEILLANCE SECTION BECAUSE THEY ARE PRIMARILY PERFORMING AIR SURVEILLANCE TASKS IN THAT SECTION.

TABLE 5

COMPARISON OF PERCENT RESPONDING TO JOB SATISFACTION AMONG DAFS 174X SHREDS AND DAFSC 276X2 PERSONNEL

	PERCENT MEMBERS RESPONDING							
	174XA (N=208)	174XB (N=129)	174XC (N=35)	174XD (N=58)	174XE (N=15)	174XF (N=135)	174XG (N=42)	27632/72 (N=45)
I. JOB INTEREST:								
DULL	14	12	23	16	13	14	10	2
SO-SO	13	12	14	17	7	13	9	0
INTERESTING	72	74	63	67	80	72	81	98
NOT REPORTED	1	2	0	0	0	1	0	0
II. UTILIZATION OF TALENTS:								
LITTLE OR NOT AT ALL	34	33	40	24	33	32	33	9
FAIRLY WELL OR BETTER	64	66	60	74	67	68	67	91
NOT REPORTED	2	1	0	2	0	0	0	0
III. UTILIZATION OF TRAINING:								
LITTLE OR NOT AT ALL	39	22	26	17	33	32	26	9
FAIRLY WELL OR BETTER	60	78	71	83	67	67	74	89
NOT REPORTED	1	0	3	0	0	1	0	2
IV. CAREER INTENTIONS:								
PLAN TO SEPARATE	6	4	9	7	0	7	7	15
UNDECIDED PROBABLY SEPARATE	13	17	23	21	20	16	9	11
UNDECIDED PROBABLY STAY	24	28	14	22	47	28	19	16
STAY FOR RETIREMENT	56	47	54	50	33	49	60	58
NOT RESPONDING	1	4	0	0	0	0	5	0
V. CAREER FIELD INTENTIONS:								
STAY IN 17XX	29	19	23	29	13	27	52	60
PLAN TO CROSSTRAIN	35	37	43	26	53	38	14	11
UNDECIDED	17	23	17	26	7	15	24	9
NOT APPLICABLE OR OTHER	19	21	17	19	27	20	10	20

DAFSC 276X2 (ENLISTED WEAPONS CONTROLLER) COMPARISON

In 1975 a portion of the DAFS 174X Air Weapons Director career area was opened to enlisted personnel in the newly-created 276X2 career ladder. Although DAFSC 276X0 personnel have served as an integral part of air weapons control operations for years, the 276X2 career ladder was created to provide personnel who function specifically as intercept controllers in ADCOM's Semi-Automatic Ground Environment (SAGE) system. Their position as enlisted weapons controllers (EWC) was designed to be roughly equivalent to officers in DAFSC 174XB. A comparison of responses between DAFSC 276X2 and DAFSC 174XB personnel indicates that there is, indeed, a great similarity in the technical performance of these two groups.

Because three enlisted career ladders - DAFSC's 276X0, 276X1, and 276X2 - combine at the 9-skill level, the number of DAFSC 27692 personnel assigned (199) was much larger than the number of personnel in the rest of the 276X2 career ladder (70). In addition, only a limited number of the DAFSC 27692 personnel actually serve as enlisted weapons controllers (EWC's) or directly supervise them. Therefore, the most fruitful comparison of the officers and EWC's seemed to be between DAFSC 27632/27672 personnel and DAFS 174XB personnel who actually control aircraft. As is shown in Table 6 there seems to be little difference in the overall job performance of these two groups. The greatest task differences seem to stem from the increased involvement of enlisted controllers as weapons control technicians or faker monitors. Thus tasks such as monitoring faker aircraft, monitoring PACE flights, changing radio frequencies, performing formal equipment checkouts, and documenting or recording weapons controller activities on forms such as intercept logs are performed by greater percentages of DAFSC 276X2 respondents than by DAFSC 174XB personnel.

Among all DAFSC 276X2 personnel, a comparison of job performance by skill level (see Table 7) shows the usual increase in involvement with managerial tasks as experience increases. As would be expected, DAFSC 27632 respondents report little involvement with managerial tasks. Although DAFSC 27672 respondents report a greater involvement with managerial tasks, they still are primarily technicians, spending approximately 73 percent of their time on controlling or surveillance-related tasks. On the other hand, DAFSC 27692 respondents report little technical task involvement and instead spend about 75 percent of their time on managerial tasks.

Job satisfaction data shows that EWC respondents seem relatively more satisfied then their officer counterparts. Table 8 also shows that the responses of 276X2 personnel indicate greater job satisfaction than the average responses of enlisted personnel in all occupational surveys conducted in 1977.

TABLE 6

PERCENT TIME SPENT ON DUTIES BY 276X2 ENLISTED WEAPONS CONTROLLERS AND 174XB OFFICERS WHO CONTROL AIRCRAFT

DUTIES	174XB WHO CONTROL (N=102)	27632/72 (N=45)	1744B WHO CONTROL (N=47)	27672 (N=34)	1741B WHO CONTROL (N=58)	27632 (N=11)
A PERFORMING GENERAL COMMAND, ADMINISTRATIVE OR ADVISORY FUNCTIONS	4	7	7	7	3	6
B PLANNING AND PROGRAMMING	-	1	-	-	1	1
C PERFORMING SUPERVISORY FUNCTIONS	6	6	10	7	3	4
D PERFORMING TRAINING FUNCTIONS	5	9	8	11	2	2
T PERFORMING INSPECTION, EVALUATION, AND SYSTEMS OR EXERCISE DEVELOPMENT FUNCTIONS	2	1	2	2	2	2
TOTAL MANAGERIAL FUNCTIONS	17	24	27	27	11	15
E PREPARING OPERATIONAL CONTROL CENTER FORMS OR LOGS	3	5	3	6	2	3
F PERFORMING MANUAL OR GENERAL AIR CONTROL SYSTEM OPERATIONS FUNCTIONS	43	37	38	34	45	46
G PERFORMING WEAPONS CONTROLLING FUNCTIONS ON 416L (SAGE) SYSTEMS	35	30	29	29	39	33
H PERFORMING WEAPONS CONTROLLING FUNCTIONS ON 416M (BUIC) SYSTEMS	-	-	-	-	-	-
I PERFORMING WEAPONS CONTROLLING FUNCTIONS ON 485L OR 407L COMPUTER-ASSISTED EQUIPMENT	-	-	-	-	-	-
J PERFORMING WEAPONS CONTROLLING FUNCTIONS ON 412L SYSTEMS	-	-	-	-	-	-
P PERFORMING AIRBORNE WEAPONS CONTROLLING AND SURVEILLANCE FUNCTIONS	-	-	-	-	-	-
Q PERFORMING AIR SUPPORT RADAR TEAM (ASRT) FUNCTIONS	-	-	-	-	-	-
TOTAL CONTROLLING FUNCTIONS	81	72	70	69	86	82
K PERFORMING GENERAL SURVEILLANCE ECCM FUNCTIONS	1	3	2	3	2	2
L PERFORMING SURVEILLANCE AND ECCM FUNCTIONS IN 416L (SAGE) SYSTEMS	1	1	1	1	1	1
M PERFORMING SURVEILLANCE AND ECCM FUNCTIONS IN 416M (BUIC) SYSTEMS	-	-	-	-	-	-
N PERFORMING SURVEILLANCE AND ECCM FUNCTIONS IN 485L OR 407L COMPUTER-ASSISTED SYSTEMS	-	-	-	-	-	-
O PERFORMING SURVEILLANCE AND ECCM FUNCTIONS IN 412L SYSTEMS	-	-	-	-	-	-
TOTAL SURVEILLANCE/ECCM FUNCTIONS	2	4	3	4	3	3
R PERFORMING COMMAND AND CONTROL CENTER FUNCTIONS	-	-	-	-	-	-
S PERFORMING MOBILITY FUNCTIONS	-	-	-	-	-	-

TABLE 7

PERCENT TIME SPENT ON MAJOR DUTY FUNCTIONS BY
DAFSC 27632, 27672, AND 27692 RESPONDENTS

DUTY FUNCTIONS	DAFSC SKILL LEVELS 27632 (N=11)	27672 (N=34)	27692 (N=27)
MANAGERIAL FUNCTIONS: (INCLUDES TASKS IN DUTIES A, B, C, D, & T)	15	27	74
CONTROLLING FUNCTIONS: (INCLUDES TASKS IN DUTIES E, F, G, H, I, J, P, & Q)	82	69	19
SURVEILLANCE OR ECCM FUNCTIONS: (INCLUDES TASKS IN DUTIES K, L, M, N, & O)	3	4	5
COMMAND AND CONTROL OR MOBILITY FUNCTIONS: (INCLUDES TASKS IN DUTIES R & S)	-	-	2

TABLE 8

PERCENT RESPONDING TO JOB SATISFACTION INDICATORS AMONG 174XB PERSONNEL WHO CONTROL AIRCRAFT, 276X2 PERSONNEL, AND ALL 1977 ENLISTED SURVEY RESPONDENTS

JOB SATISFACTION INDICATORS	174XB WHO CONTROL ACFT (N=102)	27632/ 27672 (N=45)	ALL 1977 ENLISTED SURVEY RESPONDENTS 49+ MOS TAFMS (N=21,424)
I. JOB INTEREST:			
FAIRLY INTERESTING TO VERY INTERESTING	73	98	90
II. UTILIZATION OF TALENTS:			
FAIRLY WELL OR BETTER	64	91	58
III. UTILIZATION OF TRAINING:			
FAIRLY WELL OR BETTER	78	89	58
IV. CAREER INTENTIONS:			
PLAN TO STAY FOR RETIREMENT	45	58	50
V. CAREER FIELD INTENTIONS:			
PLAN TO CROSSTRAIN TO ANOTHER CAREER FIELD	41	11	N/A

ANALYSIS OF JOB UTILIZATION STRUCTURE

The analysis of the 174X/276X2 job utilization pattern is designed to identify the major jobs performed by survey incumbents and includes an examination of both task performance and background data of members of each job group. This analysis is made possible by the Comprehensive Occupational Data Analysis Programs (CODAP), which generate an hierarchical clustering of all jobs based on the similarity of tasks performed and relative time spent on those tasks. Analysis of this job structure can facilitate an understanding of current utilization patterns within the career field, can help validate the accuracy of documents such as AFR 36-1 or AFR 39-1 Specialty Descriptions, and thus can be an aid to manpower utilization decision making.

Based on this survey analysis the utilization pattern for DAFS 174X and DAFSC 276X2 personnel appears to consist of 15 major job clusters that fall into four general categories. Although the general makeup of each category will be discussed here, Appendices A and B provide more specific information on each major cluster.

The largest category consists of six clusters which equate generally to six of the DAFS shredouts that make up the 174X Air Force Specialty. Composed primarily of mission crew personnel who are actively involved in weapons section activities, these survey respondents combine into each of the six major clusters largely on the basis of the specific air weapons control systems utilized. Thus, weapons controllers working on manual systems (primarily DAFS 174XA personnel) cluster together (GRP122), weapons controllers working in the 416L SAGE environment (including DAFS 174XB and DAFSC 276X2 personnel) form another cluster (GRP113); respondents in the 416M (BUIC) system (DAFS 174XE personnel) form a third distinct cluster (GRP071); and respondents working on 407L or 485L weapons control systems (DAFS 174XF personnel) form yet another separate cluster (GRP111). The fifth and sixth groups (GRP081 and GRP065) in this category however, are not so clearly delineated: respondents who control aircraft in the 412L system (DAFS 174XC) reported performing enough tasks in a manual mode that they clustered together with a small number of less experienced manual system controllers (DAFS 174XA); and respondents who control aircraft in the E-3A airborne warning and control system (DAFS 174XG personnel) clustered together with air surveillance officers (DAFS 174XD) from that system.

Another general category is composed of three relatively small clusters of respondents (totalling 48 people) whose controlling activities are tied to unique or special responsibilities. One of these groups (GRP131) is made up of personnel who function as advisors to Air National Guard or Air Force Reserve units. Another group (GRP084) is comprised of weapons controllers who are also deeply involved with setting up or directing unit mobility activities. In both cases the special supervisory or managerial tasks involved separate these respondents from their counterparts in more typical manual or 407L/485L

systems. The third cluster (GRP057) in this category is made up of personnel working in the airborne command and control center (ABCCC). Their airborne environment, the lack of a radar system, and their unique battle directing responsibilities differentiate this group from other manual controllers.

Five other clusters are part of a third major category of jobs in the 174X/276X2 utilization pattern. The 164 respondents who make up these five groups are differentiated from the respondents in the other categories because a vast majority of their jobs are related to non-controlling, "staff" functions. These functions entail performance of a large percentage of administrative, planning, supervisory, or training tasks. GRP083, for example, is composed of personnel whose primary responsibilities seem to be developing, evaluating, or implementing training programs. GRP038, on the other hand, contains the second largest concentration of 276X2 personnel and is composed of OIC's or NCOIC's of various control center sections or crews. These respondents spend most of their time on tasks related to personnel supervision. The third and fourth clusters (GRP089 and GRP082) in this "staff" category consist of branch chiefs or plans and special projects personnel at group, wing, or MAJCOM level organizations. The final cluster (GRP041) in this category is composed of relatively experienced personnel who, as senior or chief controllers, mission coordinators, or assistants for display, spend the greatest part of their time gathering information or coordinating and monitoring overall aircraft control and warning system operations from various control centers.

The last major category consists of only one job cluster (GRP037), totalling 39 respondents. This group is composed of surveillance and ECCM personnel from either the SAGE or BUIC systems (DAFS 174XD personnel), or from the German 412L system (DAFS 174XC personnel). The performance of tasks that insure the quality and accuracy of the air picture differentiates these respondents from most respondents in any of the other major categories in the 174X/276X2 job utilization pattern.

Analysis of DAFSC 276X2 Job Groups

Within the overall 174X/276X2 job utilization pattern, a majority of DAFSC 276X2 respondents tended to cluster in three main areas. Two of these areas are located within the B-shred cluster (GRP113) mentioned above. For example, 28 enlisted controllers are part of a general group (GRP232) of somewhat less experienced personnel that spend about 87 percent of their time on controlling tasks. These EWC's are primarily 3- and 7-skill level personnel. Another 15 enlisted controllers - all 7-skill level - are found within a group (GRP141) of respondents who work in training or standardization and evaluation sections. This group spends an average of only 52 percent of its time on controlling duties, as supervisory, administrative, and training tasks constitute a larger part of the overall job.

The third major area of concentration for DAFSC 276X2 respondents is to be found within a small cluster of NCOIC's and OIC's of region control center sections (GRP038). The enlisted respondents within this group all hold DAFSC 27692. As NCOIC's or superintendents of region control center sections or crews, these respondents spend more than 85 percent of their time on managerial tasks.

SPECIAL GROUP ANALYSIS

In addition to the analysis of the job utilization pattern and the comparison of DAFSC shreds, the survey data was also analyzed in terms of a number of background variables in order to identify any significant differences in task performance or job satisfaction. The groups contrasted were officers with different amounts of commissioned time, male -vs- female, rated -vs- non-rated, regular -vs- reserve commission, officers with a baccalaureate degree -vs- officers with a graduate degree, and officers with prior enlisted service -vs- officers without prior enlisted service. It must be noted that the very specific nature of some of this data makes it more likely to be perishable. And thus, major changes in manning or assignment policy during the past 12 months could mean that such comparisons as those between male/female or rated/non-rated officers may be valid historically but not currently.

Commissioned Service Group Comparison

As can be expected, as DAFS 174X personnel gain experience and move up in grade, their job responsibilities and attitudes toward their job change. A comparison of DAFS 174X respondents based on years of commissioned service reveals the following trends:

a. Table 9 illustrates the fact that involvement with technical, controlling-related tasks decreased and performance of more "managerial" duties (such as administration, supervision, planning or advising) increased as commissioned service time increased. This trend seems to follow a fairly consistent pattern among shreds. Although the G shred pattern is not consistent, this fact may be due to the quasi-operational status of 174X personnel at the time of the survey.

b. Corresponding to the increased involvement in managerial tasks was an increased opportunity to be assigned to positions at higher organizational levels, such as numbered Air Force, major command, or Air Staff. Although only four percent of the 174X respondents with 25-72 months commissioned service were assigned at these levels, the percentage increased to 20 percent for respondents with 73-120 months commissioned service and to 28 percent for 174X respondents with more than 120 months commissioned service.

c. Job satisfaction responses also vary in a fairly consistent pattern. As is depicted in Table 10, positive job satisfaction responses were relatively high for 174X personnel in their first 24 months of commissioned service; then they decreased for officers in the 25-48 month group and were lowest for officers in the 49-72 month group. The percentage of positive job satisfaction responses then began to increase among 174X survey respondents with 73-96 months of commissioned service and reached a high point among 174X's with more than 120 months commissioned service.

TABLE 9

PERCENT TIME SPENT ON MANAGERIAL AND CONTROLLING DUTIES BY PERSONNEL IN DAFS 174X SHREDS WITH VARIOUS AMOUNTS OF COMMISSIONED SERVICE TIME

SHREDS		MONTHS COMMISSIONED SERVICE 1-24 (N=158)	24-48 (N=105)	49-72 (N=73)	73-96 (N=90)	97-120 (N=107)	121+ (N=95)
A SHRED:	MANAGERIAL DUTIES	30	33	45	52	58	59
	CONTROLLING DUTIES	58	58	45	42	36	35
B SHRED:	MANAGERIAL DUTIES	9	25	38	55	46	58
	CONTROLLING DUTIES	89	58	60	44	45	38
C SHRED:	MANAGERIAL DUTIES	20	26	38	55	54	81
	CONTROLLING DUTIES	63	53	42	44	37	17
D SHRED:	MANAGERIAL DUTIES	10	35	45	47	64	74
	CONTROLLING DUTIES	23	23	16	20	24	10
E SHRED:	MANAGERIAL DUTIES	15	25	35	42	*	*
	CONTROLLING DUTIES	81	72	56	57	*	*
F SHRED:	MANAGERIAL DUTIES	32	39	50	66	68	74
	CONTROLLING DUTIES	57	51	43	24	25	18
G SHRED:	MANAGERIAL DUTIES	*	60	29	28	31	48
	CONTROLLING DUTIES	*	39	69	71	65	52

* TOO FEW SURVEY RESPONDENTS TO PROVIDE RELIABLE DATA

TABLE 10

PERCENT RESPONDING TO JOB SATISFACTION INDICATORS FOR
174X PERSONNEL WITH VARIOUS AMOUNTS OF COMMISSIONED SERVICE TIME

JOB SATISFACTION INDICATORS	MONTHS COMMISSIONED SERVICE					
	1-24 (N=158)	24-48 (N=105)	49-72 (N=73)	73-96 (N=90)	97-120 (N=107)	121+ (N=95)
I. JOB INTEREST:						
FAIRLY INTERESTING TO VERY INTERESTING	73	68	63	74	75	76
II. UTILIZATION OF TALENTS:						
FAIRLY WELL OR BETTER	64	57	56	69	73	78
III. UTILIZATION OF TRAINING:						
FAIRLY WELL OR BETTER	76	68	59	64	66	72
IV. CAREER INTENTIONS:						
PLAN TO STAY FOR RETIREMENT OR UNDECIDED, PROBABLY STAY	74	66	63	80	88	89

TABLE 11

PERCENTAGES OF MALE AND FEMALE PERSONNEL WITH 1-24 MONTHS AND 25-48 MONTHS COMMISSIONED SERVICE IN EACH 174X SHRED

	MONTHS COMMISSIONED SERVICE			
	1-24 MONTHS		25-48 MONTHS	
174X SHRED	FEMALES (N=23)	MALES (N=135)	FEMALES (N=27)	MALES (N=78)
A	9	25	33	29
B	65	36	15	11
C	4	3	15	9
D	0	2	15	17
E	0	3	4	4
F	22	28	18	22
G	0	0	0	8
NO RESPONSE	0	3	0	0

TABLE 12

PERCENT TIME SPENT ON MAJOR DUTY FUNCTIONS FOR MALE AND FEMALE 174X PERSONNEL WITH 1-24 OR 25-48 MONTHS COMMISSIONED SERVICE

	MONTHS COMMISSIONED SERVICE			
	1-24 MONTHS		25-48 MONTHS	
DUTY FUNCTIONS	FEMALES (N=23)	MALES (N=135)	FEMALES (N=27)	MALES (N=78)
MANAGERIAL FUNCTIONS: (INCLUDES TASKS IN DUTIES A, B, C, D, & T)	14	22	20	39
CONTROLLING FUNCTIONS: (INCLUDES TASKS IN DUTIES E, F, G, H, J, P, & Q)	81	68	60	46
SURVEILLANCE OR ECCM FUNCTIONS: (INCLUDES TASKS IN DUTIES K, L, M, N, & O)	4	6	19	10
COMMAND AND CONTROL OR MOBILITY FUNCTIONS: (INCLUDES TASKS IN DUTIES R & S)	1	4	1	5

TABLE 13

PERCENT TIME SPENT ON MAJOR DUTY FUNCTIONS FOR MALE AND FEMALE (NON-PRIOR SERVICE) DAFS 174X PERSONNEL WITH 1-24 OR 25-48 MONTHS COMMISSIONED SERVICE

	MONTHS COMMISSIONED SERVICE			
	1-24 MONTHS		25-48 MONTHS	
DUTY FUNCTION	FEMALES (N=18)	MALES (N=90)	FEMALES (N=27)	MALES (N=48)
MANAGERIAL FUNCTIONS: (INCLUDES TASKS IN DUTIES A, B, C, D, & T)	16	23	20	35
CONTROLLING FUNCTIONS: (INCLUDES TASKS IN DUTIES E, F, G, H, I, J, P, & Q)	79	68	60	50
SURVEILLANCE OR ECCM FUNCTIONS: (INCLUDES TASKS IN DUTIES K, L, M, N, & O)	4	5	19	10
COMMAND AND CONTROL OR MOBILITY FUNCTIONS: (INCLUDES TASKS IN DUTIES R & S)	1	4	1	5

TABLE 14

PERCENTAGES OF MALE AND FEMALE 174X PERSONNEL IN ADCOM WITH 1-48 MONTHS COMMISSIONED SERVICE ASSIGNED TO SPECIFIC DUTY POSITIONS

	1-48 MONTHS COMMISSIONED SERVICE			
	ADCOM		174XB	
DUTY POSITION	FEMALES (N=24)	MALES (N=42)	FEMALES (N=15)	MALES (N=34)
AIR SURVEILLANCE OFFICER	4	12	-	-
STANDARDIZATION/EVALUATION	0	10	0	6
TRAINING OFFICER	0	7	0	9
WEAPONS DIRECTOR	0	12	0	15

Male -vs- Female Comparison

Because of the close proximity of some air weapons control operations to battle areas, female 174X personnel have been restricted from some assignments. Therefore, utilization of women in this career field has been an item of concern to force managers. Of the 174X survey respondents, 53 (eight percent) are female officers. Because of the recent inclusion of women into this career area, 50 of the 53 reported less than 48 months commissioned service. Comparison of their composite job description with that of 174X men who had less than 48 months commissioned service shows some distinct differences in their utilization. However, an increase in the percentage of female 174X personnel assigned to TAC in the last year may have altered, somewhat, the utilization pattern reported here.

The first, most obvious difference is that there was a much greater concentration of female 174X officers than male 174X officers in air defense operations, more specifically, in the B and C shreds and in ADCOM (see Table 11). As has been shown in the section on shred comparisons, B shred respondents reported spending a significantly greater amount of time on actual controlling tasks and less time on administrative, advisory, supervisory, or training tasks than did respondents from other shreds.

This assignment factor may account for a second important difference in male/female responses: male personnel reported more involvement in "managerial" (administrative, supervisory, planning, or training) tasks than did their female counterparts. This fact is illustrated by Table 12, which shows that 174X males with 25-48 months commissioned service spent almost twice as much time (39 percent to 20 percent) on managerial tasks as did 174X females. Even adjusting for the larger percentage of males with prior enlisted experience, we find that non-prior service males still spent more time on managerial tasks than did non-prior service females in the same commissioned time groups (see Table 13).

However it is also important to note that assignment restrictions may not have been the only reason for lower female participation in managerial duties. The data show that, even within areas with a heavy concentration of females, (i.e., ADCOM or B shred), a greater percentage of male 174X's reported that they worked in some positions of increased responsibility (see Table 14). In fact, none of the female 174XB respondents reported that they had been assigned as weapons directors (a natural, first-step supervisory position in the SAGE system), whereas 15 percent of their male counterparts reported that they worked as weapons directors. These responses occurred even though female respondents in each of these specific groups averaged more time in the career field than did their male counterparts.

It is possible that some of this difference in utilization may be reflected in job satisfaction data, for the fifty 174X female respondents seemed less satisfied with their job than did the male respondents. A

slightly greater percentage of female 174X personnel reported their job is dull (16 percent to 11 percent); a greater percentage of them reported that their job utilizes their talents "little" or "not at all" (54 percent to 34 percent); a greater percentage of them reported that they plan to crosstrain to another career field (60 percent to 51 percent); and a smaller percentage of them said they plan to stay in the Air Force until retirement (24 percent to 44 percent).

Rated -vs- Non-Rated Comparison

Approximately nine percent of the DAFS 174X respondents reported possessing a current aeronautical rating as a pilot (eight percent) or navigator (one percent). Of these 54 rated officers, 40 (74 percent) were in the 49-120 months of commissioned service group. To determine the utilization of this rated 174X resource, their responses were compared to responses of non-rated 174X officers with 49-120 months of commissioned service (N=229). The results of this comparison indicate that the rated respondents possessed much less career field experience (average of 26 months in the career field to 76 months for non-rated respondents), and tended to be more involved in controlling aircraft and in some supervisory positions.

As indicated in Table 15, rated respondents reported spending a slightly greater percentage of time on tasks from controlling duties than did their non-rated counterparts. This may have been due to the fact that a larger percentage of the rated respondents (50 percent to 19 percent for non-rated) were assigned to ADCOM, which has an air defense mission requiring a greater amount of time on scope. In fact, while 75 percent of the rated respondents reported that their present job involved controlling aircraft, only 58 percent of the non-rated respondents indicated that they worked in controlling jobs.

It seems, however, that those controlling jobs entailed an increased amount of supervisory responsibility, for 85 percent of the rated respondents reported that they supervised while only 51 percent of their non-rated counterparts were in supervisory positions. As is shown in Table 16, the major differences between the types of positions held by rated and non-rated officers were the greater concentrations of rated officers as intercept controllers, senior directors, training officers, and weapons directors. It seems significant to note that the increased concentration in these positions corresponds to a similar concentration among all 174X's in the 49-72 months commissioned service group (see Table 16). This correlation is also supported by the fact that only 5 percent of the rated respondents with 49-120 months commissioned service (compared to 17 percent of their non-rated counterparts) were assigned at higher organizational levels such as numbered air force, major command, or Air Staff. Once again the rated percentage is similar to the figure (six percent) for all 174X personnel with 49-72 months of commissioned service. Thus, although this group of rated officers averaged 100 months of active service time, their utilization as 174X's in some ways corresponded to that of junior captains in the air weapons control career field.

TABLE 15

PERCENT TIME SPENT ON MAJOR DUTY FUNCTIONS BY RATED AND NON-RATED DAFS 174X PERSONNEL WITH 49-120 MONTHS COMMISSIONED SERVICE

DUTY FUNCTION	49-120 MONTHS COMMISSIONED SERVICE TIME NON-RATED (N=229)	RATED (N=40)
MANAGERIAL FUNCTIONS: (INCLUDES TASKS IN DUTIES A, B, C, D, & T)	53	46
CONTROLLING FUNCTIONS: (INCLUDES TASKS IN DUTIES F, G, H, I, J, P, & Q)	39	48
SURVEILLANCE OR ECCM FUNCTIONS: (INCLUDES TASKS IN DUTIES K, L, M, N, & O)	4	4
COMMAND AND CONTROL OR MOBILITY FUNCTIONS: (INCLUDES TASKS IN DUTIES R & S)	4	2

TABLE 16

PERCENTAGES OF RATED AND NON-RATED DAFS 174X PERSONNEL WITH 49-120 MONTHS COMMISSIONED SERVICE AND OF ALL DAFS 174X PERSONNEL WITH 49-72 MONTHS COMMISSIONED SERVICE ASSIGNED TO SPECIFIC DUTY POSITIONS

	MONTHS COMMISSIONED SERVICE		
	49-120 MONTHS		49-72 MONTHS
DUTY POSITIONS	NON-RATED (N=229)	RATED (N=45)	ALL 174X (N=73)
INTERCEPT CONTROLLER	16	33	30
RADAR INPUTS AND COUNTERMEASURES OFFICER	5	0	7
SENIOR DIRECTOR	11	23	19
STANDARDIZATION/EVALUATION OFFICER	14	18	16
TRAINING OFFICER	14	30	21
WEAPONS DIRECTOR	14	25	25

Job satisfaction indicators show that rated respondents were somewhat less satisfied with their present duties than are their non-rated counterparts. A slightly smaller percentage of the rated officers reported that their job is interesting (62 percent to 73 percent for non-rated); less of the rated officers reported that their job utilizes their talents at least fairly well (55 percent to 70 percent for non-rated); and less of the rated officers reported that their job utilizes their training at least fairly well (48 percent to 66 percent for non-rated).

These satisfaction differences seemed to have little bearing on career intentions, however, for 70 percent of the rated respondents reported that they will stay in the Air Force until retirement, while only 53 percent of the non-rated respondents gave the same indication.

Regular -vs- Reserve Comparison

Of the 626 respondents with DAFS 174X, 136 (22 percent) held a regular commission. A comparison of these regular 174X personnel with those 174X survey respondents with a reserve commission was made to determine any differences in utilization, job satisfaction, or career pattern. Because of some dissimilarity in rated/non-rated utilization and the fact that the percentage of regular officers with less than 49 months service is relatively small, the regular/reserve comparisons were made among non-rated 174X personnel with 49-96 months commissioned service and again among non-rated 174X personnel with more than 97 months commissioned service.

In terms of overall job utilization, the data show only slight differences in task performance between regular and reserve respondents in the 49-96 months group but a distinctly larger concentration on "managerial" tasks (administrative, advisory, planning and evaluation tasks) among regular 174X respondents with more than 96 months commissioned service (see Table 17). There were also some differences in the positions to which regular and reserve 174X's were assigned. Table 18 shows that a slightly greater percentage of regular officers reported working as Battle Staff Operations Officers, Flight Commanders, IG Team members, Intercept Controllers, Senior Directors, Staff Officers, and Standardization/Evaluation Officers. Reserve 174X respondents were more predominant in Air Surveillance, RICMO, Training, and Weapons Director positions. In addition, a much larger percentage of regular officers in the two commissioned service time groups (25 percent and 43 percent) were assigned to positions at higher organizational levels such as numbered Air Force or MAJCOM than were their reserve counterparts (11 percent and 23 percent respectively).

Despite the difference in task performance among regular and reserve 174X respondents with more than 97 months of commissioned service, there was little difference in the job satisfaction responses of these two groups. In fact, as Table 19 shows, a greater difference in

TABLE 17

PERCENT TIME SPENT ON MAJOR DUTY FUNCTIONS BY NON-RATED REGULAR AND RESERVE 174X PERSONNEL WITH 49-96 MONTHS COMMISSIONED SERVICE AND 97+ MONTHS COMMISSIONED SERVICE

	MONTHS COMMISSIONED SERVICE			
	49-96 MONTHS		97+ MONTHS	
DUTY FUNCTIONS	REGULAR (N=44)	RESERVE (N=100)	REGULAR (N=37)	RESERVE (N=129)
MANAGERIAL FUNCTIONS: (INCLUDES TASKS IN DUTIES A, B, C, D, & T)	52	46	74	60
CONTROLLING FUNCTIONS: (INCLUDES TASKS IN DUTIES F, G, H, I, J, P, & Q)	40	43	20	33
SURVEILLANCE OR ECCM FUNCTIONS: (INCLUDES TASKS IN DUTIES K, L, M, N, & O)	4	7	3	3
COMMAND AND CONTROL OR MOBILITY FUNCTIONS: (INCLUDES TASKS IN DUTIES R & S)	4	4	3	4

TABLE 18

PERCENTAGES OF NON-RATED REGULAR AND RESERVE OFFICERS IN DAFS 174X WITH 49-96 MONTHS COMMISSIONED SERVICE OR 97+ MONTHS COMMISSIONED SERVICE ASSIGNED TO SPECIFIC DUTY POSITIONS

	MONTHS COMMISSIONED SERVICE			
	49-96 MONTHS		97+ MONTHS	
DUTY POSITIONS	REGULAR (N=44)	RESERVE (N=100)	REGULAR (N=37)	RESERVE (N=129)
AIR SURVEILLANCE OFFICER	5	13	0	5
RICMO	2	9	3	3
TRAINING OFFICER	14	16	8	14
WEAPONS DIRECTOR	14	20	11	0
BATTLE STAFF OPERATIONS OFFICER	2	2	11	2
FLIGHT COMMANDER	2	1	5	1
IG TEAM MEMBER	0	1	5	1
INTERCEPT CONTROLLER	18	19	19	11
SENIOR DIRECTOR	16	9	14	11
STAFF OFFICER	16	9	24	19
STANDARDIZATION/EVALUATION OFFICER	18	13	16	11

TABLE 19

PERCENT RESPONDING TO SPECIFIC JOB SATISFACTION INDICATORS FOR REGULAR AND RESERVE OFFICERS IN DAFS 174X WITH 49-96 MONTHS COMMISSIONED SERVICE AND 97 MONTHS COMMISSIONED SERVICE

	MONTHS COMMISSIONED SERVICE			
	49-96 MONTHS		97+ MONTHS	
JOB SATISFACTION INDICATORS	REGULAR (N=44)	RESERVE (N=100)	REGULAR (N=37)	RESERVE (N=129)
I. JOB INTEREST:				
FAIRLY INTERESTING TO VERY INTERESTING	80	66	78	77
II. UTILIZATION OF TALENTS:				
LITTLE OR NOT AT ALL	23	38	22	22
III. UTILIZATION OF TRAINING:				
LITTLE OR NOT AT ALL	23	40	24	29
IV. CAREER INTENTIONS:				
DEFINITELY PLAN TO STAY FOR RETIREMENT	64	33	81	70
V. CAREER FIELD INTENTIONS:				
PLAN TO CROSS-TRAIN TO ANOTHER CAREER FIELD	30	37	5	21

job satisfaction responses occurs between regular and reserve officers with 49-96 months commissioned service, even though their job descriptions were much more similar. At least a part of this difference between the less experienced groups may be due to the regular officers' greater involvement with higher level organizations.

Advanced Degree -vs- Baccalaureate Degree Comparison

Although 114 (18 percent) of the DAFS 174X respondents possessed a graduate degree. The survey data seems to indicate that possession of an advanced degree had little impact on the utilization of 174X personnel. In fact, a comparison of these personnel with non-advanced degree personnel with the same amount of commissioned service time shows relatively little difference in task performance and duty assignment and a small difference in job satisfaction. The differences in individual task performance were very slight for respondents with 49-120 months commissioned service, but the differences increased somewhat for respondents who had more than 120 months time (see Table 20). In addition, there appear to be only minimal differences in duty assignments between advanced degree and non-advanced degree holders.

Advanced degree personnel seemed to be slightly more satisfied with their positions, for a larger percentage reported that their job is at least fairly interesting, and a greater percentage of advanced degree respondents with more than 120 months commissioned time reported that their job utilizes their talents at least fairly well or better (see Table 21).

The graduate degrees held by 174X personnel were concentrated mainly in five areas: Business or Management (33 percent); Sciences other than Physics, Computer Science, or Social Sciences (18 percent); Social Sciences (13 percent); Guidance and Counseling (12 percent); and Education (10 percent).

More important, the perceptions of the usefulness of these advanced degrees seem to alter as the respondents moved into positions of greater responsibility. For although 42 percent of the advanced degree personnel with between 49-120 months commissioned service reported that their formal education has been of little or no value in their present job, only 24 percent of the advanced degree holders with more than 120 months commissioned service felt the same way.

Prior Service -vs- Non-Prior Service Comparison

Of the 626 officers responding to the 174X Occupational Survey, 95 indicated that they had served at least two years of active military service prior to being commissioned. Responses of these "prior service" personnel were compared with the responses of the other 174X survey respondents to determine if this extra experience had any effect on the types of tasks performed, duty positions held, or job satis-

TABLE 20

COMPARISON OF PERCENT MEMBERS PERFORMING TASKS WHICH BEST DIFFERENTIATE BETWEEN ADVANCED DEGREE AND NON-ADVANCED DEGREE 174X PERSONNEL WITH 120+ MONTHS COMMISSIONED SERVICE

TASK		ADVANCED DEGREE (N=29)	NO ADVANCED DEGREE (N=29)	DIFFERENCE
A55	MARK, DOWNGRADE OR PAGE CHECK CLASSIFIED DOCUMENTS	38	10	+28
C115	WRITE OR ENDORSE OFFICER EFFICIENCY REPORTS (OER)	52	24	+28
T22	COORDINATE WITH OTHER SERVICE UNITS TO PLAN OR IMPLEMENT LIVE, JOINT-SERVICE EXERCISES	28	4	+24
A69	PREPARE BRIEFINGS	93	72	+21
C9	COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	59	38	+21
D41	EVALUATE INSTRUCTORS	28	7	+21
F64	DIRECT AIRCRAFT TO GO TO STRATEGIC ORBIT POINTS (STOP)	17	38	-21
F66	DIRECT ALERT FIGHTER AIRCRAFT TO SCRAMBLE	7	28	-21

TABLE 21

PERCENT RESPONDING TO SPECIFIC JOB SATISFACTION INDICATORS FOR ADVANCED DEGREE AND NON-ADVANCED DEGREE DAFS 174X PERSONNEL WITH 49-120 MONTHS COMMISSIONED SERVICE AND 121+ MONTHS COMMISSIONED SERVICE

	MONTHS COMMISSIONED SERVICE			
	49-120 MONTHS		121+ MONTHS	
JOB SATISFACTION INDICATORS	ADVANCED DEGREE (N=64)	NO ADVANCED DEGREE (N=102)	ADVANCED DEGREE (N=29)	NO ADVANCED DEGREE (N=29)
I. JOB INTEREST:				
DULL	16	18	17	24
SO-SO	9	15	7	14
INTERESTING	75	65	76	62
NOT REPORTED	0	2	0	0
II. JOB UTILIZES TALENTS:				
LITTLE OR NOT AT ALL	34	26	14	35
FAIRLY WELL OR BETTER	63	73	86	65
NOT REPORTED	3	1	0	0

faction. Since 78 of the 95 prior service respondents (82 percent) had less than 49 months commissioned service time, comparisons were made between prior service and non-prior service 174X personnel in each of three commissioned service time groups: 1-24 months, 1-48 months, and 49-96 months.

Data analysis shows that the most notable difference between prior service and non-prior service respondents was in their types of assignments: a much larger percentage of prior service respondents were in CONUS locations, assigned to ADCOM, and in the B and D shreds (see Table 22). In terms of task performance, however, Table 23 shows that there was very little difference between prior service and non-prior service respondents in the 1-48 month group other than that determined by their concentration in the ADCOM automated (416L-SAGE) system. Among the 49-96 months group, a greater concentration on controlling duties by prior service personnel may have been due to fact that 4 of the 11 prior service respondents were in the new E-3A (SENTRY) program.

A comparison of job satisfaction indicators reveals that, although a somewhat larger percentage of prior service respondents generally indicated positive job interest, utilization of talents, and utilization of training, there was a very large degree of difference in their career intentions. Even in the first four years of their commissioned service, prior service respondents seemed much more committed to staying in the military until retirement (see Table 24).

TABLE 22

PERCENT OF PRIOR SERVICE AND NON-PRIOR SERVICE DAFS 174X PERSONNEL ASSIGNED TO VARIOUS LOCATIONS, DAFSC SHREDS OR MAJOR COMMANDS

	MONTHS COMMISSIONED SERVICE					
	1-24 MONTHS		25-48 MONTHS		49-96 MONTHS	
DUTY ASSIGNMENT	PRIOR SERVICE (N=48)	NON-PRIOR SERVICE (N=108)	PRIOR SERVICE (N=78)	NON-PRIOR SERVICE (N=183)	PRIOR SERVICE (N=11)	NON-PRIOR SERVICE (N=152)
I. LOCATION:						
CONUS	92	68	73	56	73	48
OVERSEAS	6	32	26	44	27	51
NOT RESPONDING	2	0	1	0	0	1
II. DAFSC SHRED:						
A	23	22	23	27	46	42
B	54	35	36	27	0	12
C	0	5	8	6	0	5
D	4	1	10	7	9	11
E	2	3	4	3	0	3
F	17	32	17	28	9	19
G	0	0	2	2	36	8
NOT REPORTED	0	2	0	0	0	0
III. MAJOR COMMAND:						
AAC	0	3	4	5	0	5
ADCOM	71	38	56	36	18	21
AFSC	0	2	0	1	9	2
PACAF	0	2	1	6	0	9
TAC	23	30	19	24	55	29
USAFE	6	24	19	26	18	33
OTHERS	0	1	1	2	0	1

TABLE 23

PERCENT TIME SPENT ON MAJOR DUTY FUNCTIONS BY PRIOR-SERVICE AND NON-PRIOR SERVICE 174X PERSONNEL WITH 1-24 MONTHS, 25-48 MONTHS, OR 49-96 MONTHS OF COMMISSIONED SERVICE

	MONTHS COMMISSIONED SERVICE					
	1-24 MONTHS		25-48 MONTHS		49-96 MONTHS	
DUTY FUNCTIONS	PRIOR SERVICE (N=48)	NON-PRIOR SERVICE (N=108)	PRIOR SERVICE (N=78)	NON-PRIOR SERVICE (N=183)	PRIOR SERVICE (N=11)	NON-PRIOR SERVICE (N=152)
MANAGERIAL FUNCTIONS: (INCLUDES TASKS IN DUTIES A, B, C, D, & T)	22	19	25	29	33	49
CONTROLLING FUNCTIONS: (INCLUDES TASKS IN DUTIES F, G, H, I, J, P, & Q)	70	72	63	60	59	41
SURVEILLANCE OR ECCM FUNCTIONS: (INCLUDES TASKS IN DUTIES K, L, M, N, & O)	4	6	8	8	3	6
COMMAND AND CONTROL OR MOBILITY FUNCTIONS: (INCLUDES TASKS IN DUTIES R & S)	4	3	4	3	5	4

TABLE 24

PERCENT RESPONDING TO SPECIFIC JOB SATISFACTION INDICATORS FOR PRIOR SERVICE AND NON-PRIOR SERVICE 174X PERSONNEL WITH 1-48 MONTHS OR 49-96 MONTHS COMMISSIONED SERVICE

	MONTHS COMMISSIONED SERVICE			
	1-48 MONTHS		49-96 MONTHS	
JOB SATISFACTION INDICATORS	PRIOR SERVICE (N=78)	NON-PRIOR SERVICE (N=183)	PRIOR SERVICE (N=11)	NON-PRIOR SERVICE (N=152)
I. JOB INTEREST:				
PERCENT RESPONDING FAIRLY INTERESTING TO VERY INTERESTING	76	69	91	68
II. UTILIZATION OF TALENTS:				
PERCENT RESPONDING FAIRLY WELL OR BETTER	71	57	73	62
III. UTILIZATION OF TRAINING:				
PERCENT RESPONDING FAIRLY WELL OR BETTER	68	75	73	61
IV. CAREER INTENTIONS:				
PERCENT RESPONDING PLAN TO STAY FOR RETIREMENT	72	26	73	42

AFR 36-1 AND 39-1 COMPARISON TO SURVEY DATA

The survey results were compared to the AFR 36-1 and AFR 39-1 job descriptions for DAFS 174X and DAFSC's 27632/27672. Given the space limitations of these documents, the AFR 36-1 job description reflects a general but accurate picture of the jobs performed by most 174X personnel. The AFR 39-1 description, however, attempts to describe in approximately 150 words the complex duties and responsibilities of enlisted weapons controllers. Elaboration of this very general job description is necessary to portray a much more accurate picture of the jobs performed by DAFS 27632/72 personnel. Specifically, paragraph "a" could be expanded significantly to explain what the controller does during the "employment of assigned manned interceptors." The fact that he or she interprets and inputs radar track data and mission information by means of semi-automated equipment (scope and console); determines heading, speed, location, and altitude of airborne objects; and insures communication of mission information and tactics to friendly aircraft would seem to be very helpful to those not already very familiar with air operations.

COMPARISON OF 174X JOB SATISFACTION RESPONSES TO PREVIOUS OFFICER SURVEY RESPONSES

As only a few previous officer occupational surveys have been accomplished at the time of this report, there is very little data with which to compare the job satisfaction responses of DAFS 174X personnel. To facilitate some better understanding of the 174X responses, however, Table 25 juxtaposes these responses with job satisfaction responses from a recent (1978) survey of the 202X/203X (Space Systems) DAFS's and also from a survey of the 302X, 303X, 304X, and 305X (Communications/Electronics) DAFS's that was administered in late 1974.

Remembering that one must exercise caution when utilizing the four-year old 30XX data, it appears that the DAFS 174X job satisfaction responses are not notably different from the responses of the other officer career field members. Although job interest responses from the 30XX and 202X personnel are slightly higher than those of 174X personnel, 203X personnel job interest and perception of utilization of talents and training are slightly lower than the 174X figures. In addition 174X utilization field and career plans responses are very similar to those of all except 202X personnel.

TABLE 25

COMPARISON OF PERCENT RESPONDING TO SPECIFIC JOB SATISFACTION INDICATORS BETWEEN DAFS 174X PERSONNEL AND RESPONDENTS FROM PREVIOUS OFFICER SURVEYS

JOB SATISFACTION INDICATORS	CAREER AREAS						
	174X (N=626)	202X (N=52)	203X (N=128)	302X* (N=384)	303X* (N=280)	304X* (N=163)	305X* (N=379)
I. JOB INTEREST:							
DULL	14	8	17	13	9	7	9
SO-SO	13	13	14	8	8	10	7
INTERESTING	72	77	67	79	83	83	84
NOT RESPONDING	1	2	2	0	0	0	0
II. UTILIZATION OF TALENTS:							
LITTLE OR NOT AT ALL	33	23	43	----- NO COMPATIBLE DATA -----			
FAIRLY WELL OR BETTER	66	77	57				
NOT RESPONDING	1	0	0				
III. UTILIZATION OF TRAINING:							
LITTLE OR NOT AT ALL	30	21	31	----- NO COMPATIBLE DATA -----			
FAIRLY WELL OR BETTER	69	77	68				
NOT RESPONDING	1	2	1				
IV. CAREER INTENTIONS:							
SEPARATE WITHOUT RETIREMENT	6	6	7	14	12	11	14
UNDECIDED, PROBABLY SEPARATE	15	27	14	16	15	15	13
UNDECIDED, PROBABLY STAY FOR RETIREMENT	25	40	25	20	19	18	19
STAY FOR RETIREMENT	52	27	52	50	54	56	54
NOT RESPONDING	2	0	2	0	0	0	0
V. CAREER FIELD INTENTIONS:							
STAY IN CAREER FIELD SURVEYED	27	15	24	----- NO COMPATIBLE DATA -----			
CROSSTRAIN TO ANOTHER CAREER FIELD	35	42	38				
UNDECIDED OR OTHER	38	43	38				

* THIS DATA IS FROM A 1975 SURVEY REPORT BASED ON DATA COLLECTED IN 1974.

COMPARISON OF SURVEY DATA TO TRAINING DOCUMENTS

A review of weapons controller training was accomplished by comparing survey data to various course training documents. Assistance was provided by subject matter specialists at the training locations, who matched inventory tasks with appropriate paragraphs in course syllabi or plans of instruction. Although detailed, specific data has been and will be provided directly to training organizations, this analysis has prompted the following general observations:

a. Of 684 technical tasks in the survey, only 52 tasks are performed by more than 30 percent of the career field members who control aircraft, and only 15 tasks are performed by more than 50 percent. These figures support the present training concept of a short basic course followed by channelized training based on the air control system utilized.

b. Analysis of the ECCM Operations Officer course reveals that 26 of the 69 technical tasks matched to the plan of instruction are performed by less than 30 percent of the 174X respondents. This may be due to the fact that D shred personnel perform air surveillance or ECCM operations in either SAGE or E-3A (SENTRY) systems. The present course contains two blocks of instruction (approximately 110 hours) primarily pertaining to the ADCOM (SAGE) system and one block of instruction in which at least 25 hours pertains to the E-3A system. As many of the tasks performed by personnel in the D shred seem system specific, the present group lock-step design may merit reconsideration. Channelization of a portion of the course may be advantageous as long as students are still going to either of these two types of assignments.

c. Another data item that may be training related concerns the use of the 407L or 485L computer-assisted equipment by 174XF personnel. Among 101 174XF personnel who report that their job entails controlling aircraft, a relatively large percentage indicate that they employ the computer-assist capabilities less than 20 percent of the time (see Table 26). Previous discussions with personnel using the 407L equipment had prompted inclusion of this question in the survey. Whether these personnel have not received sufficient training in the use of this equipment or whether the computer-assist capabilities are, indeed, too slow for current mission demands is a point that bears scrutiny.

TABLE 26

PERCENT MEMBERS RESPONDING TO ALTERNATIVES IN BACKGROUND ITEMS ON EMPLOYING COMPUTER-GENERATED TRACK SYMBOLOGY AND SEEKING COMPUTER-GENERATED TACTICS SOLUTIONS

WHEN PERFORMING WEAPONS CONTROLLING ON 407L/485L EQUIPMENT:	DAFS 174X F (N=101)
I. HOW OFTEN DO YOU EMPLOY COMPUTER-GENERATED TRACK SYMBOLOGY?	
20% OF THE TIME OR LESS	22
21% TO 40%	9
41% TO 60%	7
61% TO 80%	11
81% TO 100%	37
NOT RESPONDING	14
II. HOW OFTEN DO YOU SEEK COMPUTER-GENERATED TACTICS SOLUTIONS?	
20% OF THE TIME OR LESS	57
21% TO 40%	6
41% TO 60%	7
61% TO 80%	7
81% TO 100%	10
NOT RESPONDING	13

APPENDIX A

ANALYSIS OF 15 MAJOR JOB GROUPS

I. 174XA Manual System Controllers (GRP122).

This group of 98 respondents is one of the largest and certainly the most diverse of the major clusters that make up this utilization pattern. The vast majority (85 percent) of the respondents in this group hold the A shred, and they all cluster together primarily because they are involved with controlling aircraft using various types of manual systems, including the UPA-35, ANFYQ-9, or bomb-directing equipment. As the members of this group are assigned to a variety of MAJCOMs and mission environments, they average the largest number of tasks (171) of any of the clusters described in this analysis.

This manual system cluster divides basically into two subgroups. The first subgroup (GRP126) is composed of personnel who are controllers or senior directors in various types of units including TAC aggressor controller squadrons, AFSC test squadrons, range safety squadrons, AAC and ADCOM air control and warning squadrons, and tactical control flights. The second subgroup (GRP202) is made up primarily of flight and squadron operations or operations training officers. These respondents on the average perform about twice as many tasks as the members of the other subgroup (GRP126), for in addition to performing tasks related to controlling aircraft, they also spend significantly more time on such administrative or supervisory tasks as drafting replies to evaluation or inspection reports, supervising DAFSC 276X0 personnel, conducting staff meetings, or developing management policies.

II. 174XF 407L/485L Computer-Assisted System Controllers (GRP111).

Composed primarily of members of the F shred, this group of respondents is engaged in controlling aircraft utilizing the 407L and/or 485L computer-assisted equipment. The members of this cluster are all assigned to Tactical Control Squadrons in USAFE or TAC, and they are differentiated from other respondents by virtue of their equipment-specific controlling tasks, such as performing console set-up or shutdown procedures; accepting, initiating on, or gaining computer access to tracks; or evaluating or overriding computer-generated tactics solutions. They also spend more time on basic mobility functions such as tearing down, packing, or loading mobility increments.

The 59 members within this cluster can be even more specifically identified as members of subgroups that reflect their involvement in squadron operational duty positions, such as weapons assignment officers, senior directors, air surveillance officers, training instructors, or plain weapons controllers.

It may be interesting to note that the respondents in this cluster average much less experience in the career field (35 months) than all but one of the other major clusters, and that their responses to job satisfaction indicators are also relatively low (see Table 27).

III. Manual or 412L System Controllers (GRP081).

Averaging only 24 months of career field experience (the least of any of the 15 clusters), the 26 respondents in this cluster fall into two distinct subgroups. One subgroup (GRO148) consists of C shred controllers who are part of the 412L air defense system in Germany. The other subgroup (GRP95) consists of A shred personnel working at a variety of manual control sites both in CONUS and overseas. Although the C shred respondents are differentiated from members of most other clusters primarily because they control aircraft using the 412L equipment, their performance of a number of tasks with the equipment in a manual mode has caused them to cluster together with this small group of manual system controllers. (A large majority of the survey respondents in this subgroup indicate that they employ computer-generated track symbology and computer generated tactical solutions less then 20 percent of the time when controlling aircraft). Thus, performance of such tasks as determining headings manually using visual estimations, or determining air mass geometry using rules of thumb are common to both subgroups in this cluster.

In addition, the members of the A shred subgroup (GRP95) average only 17 months in the career field, perform an average of 56 tasks, and spend 83 percent of their time on controlling tasks. This relative inexperience and the resultant job specialization may be the factors that differentiate this subgroup from the larger manual control system cluster (GRP122) described previously and whose members average 53 months in the career field, perform an average of 171 tasks, and spend approximately 56 percent of their time on controlling tasks.

IV. 174XE 416M Backup Interceptor Control (BUIC) System Controllers (GRP071).

Most of the 14 members of this group work on the 416M (BUIC) system and, except for one 174XB respondent, all are members of the E shred. Within this relatively small job group are two identifiable types of people: Air Safety Officers working for AFSC and Air Weapons Controllers or Senior Directors assigned to ADCOM at Tyndall AFB or St Margaret's, Canada. Although the group is differentiated primarily by its use of the 416M consoles, the air safety officers are further differentiated by performance of tasks such as coordinating with drone controllers to determine operational status of drone equipment, coordinating with range patrol to determine clearance for armament launches, or handing aircraft off to ground or airborne forward air controllers.

V. 174XB/276X2 416L SAGE System Controllers (GRP113).

The largest cluster in the 174X/276X2 utilization structure is made up primarily of officers (DAFS 174XB) and enlisted (DAFSC 276X2) personnel assigned to ADCOM's Semi-Automated Ground Enviornment (SAGE) System. The fact that they perform many controlling tasks using the 416L SAGE consoles differentiates these respondents from members of other clusters. Other differentiating tasks include working with PACE flights and performing positive launch control procedures.

Consisting of 152 members, this cluster divides into two subgroups based on experience and the amount of supervisory or administrative work performed. Each of the subgroups in turn is made up of several distinct job types. One subgroup (GRP232) consists of less-experienced personnel in the weapons section who concentrate approximately 85 percent of their time on tasks directly related to controlling missions. The other subgroup (GRP141) consists of personnel in standardization/evaluation, training, or weapons director positions who spend about 45 percent of their time on training, supervisory, administrative, or evaluative tasks. Despite a somewhat greater representation in the latter subgroup, the enlisted weapons controllers (DAFSC 276X2) are well-represented in both subgroups and comprise about 28 percent of the entire cluster.

VI. E-3A (SENTRY) Airborne Weapons Controllers and Surveillance Personnel (GRP065).

Thirty-six members of the 174X/276X2 utilization structure clustered together on the basis of their operational duties aboard the E-3A (SENTRY) airborne warning and control system. Twenty-six of these respondents carry the G shred and form parts of three weapons section subgroups dependent upon their involvement as weapons directors, production acceptance officers, or instructors in the new E-3A system.

Ten other members of this cluster carry the D shred and form a distinct subgroup (GRP176) of surveillance officers. Although survey respondents in this subgroup perform some tasks that are common to surveillance officers in other systems, their concentration on system specific tasks, such as initiating on tracks using 411L (E-3A) consoles, performing E-3A surveillance crosstell functions, or performing or practicing life support equipment operations, cause the E-3A surveillance personnel to be clustered together with the E-3A weapons section personnel rather than with the surveillance/ECCM cluster described below.

Once again it is important to remember that responses of personnel in the new E-3A system were gathered while this system was still in formative stages. The job descriptions may not reflect the same emphasis on tasks that one would obtain in a fully operational environment.

VII. Advisors to Air National Guard and Reserve Units (GRP131).

A relatively small, independent job type consists primarily of personnel who function as advisors to Air National Guard or Air Force Reserve units. Assigned to TAC, these 10 respondents are in either the A or F shreds, and as they average 97 months in the career field, make up one of the most experienced job groups in the structure.

As can be expected from their duty titles, incumbents in this group are differentiated from other A or F shred controllers because the majority (59 percent) of their job time is spent on non-controlling, managerial functions, especially administrative or advisory tasks. Thus, such tasks as evaluating reserve forces unit training activities or advising commanders or staff agencies on capabilities, procedures, or programs are the most prominent and time consuming tasks for these personnel.

VIII. 174XA Airborne Command and Control Center Controllers (GRP057).

Another relatively small group of respondents (10 members) that broke out as a distinct, independent job type is the group of controllers flying aboard the Airborne Command and Control Center (ABCCC). These respondents are all members of the A shred, and yet they are differentiated from the A shred cluster because they do not use manual radar scopes, but rather perform their mission by virtue of plotting and status board information. Thus they do few typical "manual scope" tasks such as determining headings or air mass geometry using cursors or rules of thumb. However, they do spend more time on tasks such as practicing airborne emergency procedures such as bail-out or crash landing, or updating and monitoring status display or plotting boards.

Although only 40 percent of this group's members said their job utilizes their talents fairly well or better and only 10 percent felt their job utilizes their training fairly well or better, 90 percent said their job is interesting and 90 percent of the group indicated they plan to stay for retirement (see Table 27).

IX. Mobility Support Officers (GRP084).

The 23 respondents in this cluster are made up of A and F shred personnel who are assigned to USAFE (65 percent) or TAC (35 percent). The main factor that separates them from members of other clusters is their heavy involvement with mobility support responsibilities. In this capacity they plan for and direct the deployment of tactical air control personnel, equipment, and material to a field environment. Thus a large percentage of their time is spent on such mobility related tasks as coordinating unit mobility status with unit commanders, reviewing mobility status of personnel subject to deployment, or directing documentation, identification, or packaging of mobility materials.

The vast majority (82 percent) of the personnel in this cluster fall in either one of two subgroups. One subgroup (GRP189) is composed of USAFE mobility support officers at flight, squadron, group, or wing level, who spend less than five percent of their time on tasks related to controlling aircraft. The other subgroup (GRP224) consists of weapons controllers in tactical control flights who also have mobility support responsibilities. Thus, approximately 40 percent of their time is dedicated to controlling aircraft in a manual system and another 35 percent is devoted to their mobility duties.

Although, the members of this cluster gave job interest, utilization of talents, and career intention responses that are similar to average responses from other clusters, their responses to utilization of training was relatively low, and they had the highest percentage (57) who indicated they plan to crosstrain to another career field (See Table 27).

In the 174X/276X2 job utilization pattern, a large group of respondents (164) is combined very loosely as an entity distinct from the other major job groups. These people combine primarily because they spend at least 85 percent of their time on non-technical, managerial functions, such as evaluating, advising, planning, supervising, or training. Within this general "staff" group are five distinct groups that seem somewhat more homogeneous and which we shall treat as clusters equivalent to those already discussed.

X. Operations Training, Instructional Systems, and Training Development Personnel (GRP083).

The first of these five "staff" groups consists of personnel whose main job concentration is in training functions. The 20 members of this group spend an average of 42 percent of their time on such tasks as determining training objectives, developing formal classroom training programs, or reviewing, approving, or disapproving lesson plans. Included in this cluster are two subgroups. One subgroup (GRP115) consists primarily of operations training personnel from various tactical control squadrons; these respondents still spend about 33 percent of their time controlling aircraft. Members of the other subgroup (GRP152) spend less than ten percent of their time on controlling functions and work in such areas as combat training, ISD shops, or training development branches in TAC, ADCOM, USAFE, or PACAF units. These people seem much more involved with administration, planning, and evaluation of training programs than do the operations training personnel.

XI. NCOICs/OICs of Control Center Sections or Crews (GRP038).

Twenty-seven of the respondents within the large "staff" group come together because their job involves spending a large amount of time in supervisory functions. Approximately half of the respondents in this cluster are DAFSC 27692 personnel who describe their duty position as crew superintendent or NCOIC of various control center sections. Most of the remainder of the respondents in this group are officers who hold various supervisory positions in ADCOM (such as senior director or OIC of the operations control center), or USAFE (such as director of operations or radar branch chief).

Despite this variety in position and background, these respondents perform some common tasks, such as assigning personnel to duty positions, counseling personnel, or supervising DAFS 276X0 personnel, that tend to link them as a distinct group.

XII. Branch Chiefs or Staff Officers at Group, Wing or MAJCOM level (GRP089).

This fairly large cluster contains 51 respondents from a variety of shreds and MAJCOMs who are staff officers or branch chiefs at group, wing, or MAJCOM level organizations. Although this cluster is made up of five subgroups, the respondents do perform a number of common tasks. They spend very little time, if any, actually controlling aircraft, and the largest portion of their time is spent on basic staffing tasks, such as drafting written correspondence or electrical messages, preparing briefings, compiling or evaluating information for staff studies, and drafting inputs for operating guides or directives. Included among the various subgroups are personnel who are engaged primarily in exercise development, scheduling and coordination of live exercises, or standardization and inspection activities.

Averaging 105 months in the career field, the members of this group seem fairly content with their positions. They gave consistently high ratings in all job satisfaction areas, and also have the highest percentages who plan to stay for retirement and who plan to remain in the air weapons controller career field (see Table 27).

XIII. Center, Wing, or MAJCOM Plans and Special Projects Personnel (GRP082).

Another group of fairly diverse individuals is the cluster of personnel working in plans shops or on special projects at center, wing or MAJCOM level. The diversity among the 25 respondents in this cluster is illustrated by the fact that only 15 tasks are performed by more than 50 percent of the members of this cluster. In addition, as these people perform an average of only 28 tasks, it is likely that their activities are either highly concentrated or that they are performing unique tasks not present in the job inventory. Some of the 15 tasks that are more common to the group are drafting position or talking papers, analyzing long-range requirements for air control system operations, and determining equipment, facilities, systems, or subsystems required to support war or contingency plans.

Like the members of the preceding cluster (GRP089), these respondents are also quite experienced (average 100 months in the career field) and also reflect both relatively high job satisfaction responses and a high percentage desiring to stay in the Air Force and in the same career area.

XIV. Command and Control Center Duty Officers (GRP041).

The final cluster in the large "staff" group is made up of personnel who spend less time on administrative or supervisory functions and very little time controlling aircraft. Rather, most of their time is spent coordinating overall aircraft control and warning operations from control centers in Alaskan, PACAF, and CONUS locations. Although all of these 27 respondents possess either the A or B shred, they hold a variety of positions, including those of chief controllers in Alaska or Hawaii, senior controllers or mission coordinators in the Far East, or assistants for display in the NORAD Combat Operations Center. Once again, relatively few tasks (21) are performed by more than 50 percent of these respondents. However, the tasks that seem both to combine the members of this cluster and to differentiate them from other clusters include receiving or recording intelligence information, decoding or encoding messages, monitoring or evaluating status display or plotting board activities, and coordinating with high level agencies on significant events.

Despite the seemingly responsible nature of their positions, these respondents recorded relatively low job satisfaction scores (See Table 27). Perceptions of job interest, utilization of talents, and utilization of training were significantly lower than the average of most other clusters. In addition, only 19 percent indicated that they had definitely decided to stay in the Air Force until retirement; this figure is quite low considering that these respondents average 81 months of career field experience and 99 months of active military service.

XV. 174XD/C Surveillance and ECCM Personnel (GRP037).

The 39 members of this cluster are comprised primarily of D shred personnel who are assigned to ADCOM in the 416L (SAGE) or 416M (BUIC) systems and C shred personnel in USAFE's 412L system. They are differentiated from personnel in other clusters because more than 50 percent of their time is spent on surveillance or ECCM functions rather than on directly controlling aircraft. Thus they are most involved with tasks such as identifying radar malfunction conditions, authorizing or concurring with ECCM actions, or reporting radar degradation or malfunctions to radar maintenance personnel.

This cluster is divided into two subgroups. One subgroup (GRP201) consists of air surveillance officers or radar inputs and countermeasures officers (RICMOs) in ADCOM's SAGE or BUIC sites. Their interaction with and control of radar inputs from long range radar sites and their ability to identify and counter jamming or other radar anomalies insures a good quality air picture is available for weapons controllers. The other subgroup (GRP67) is made up of display controllers, master display controllers, and chief controllers in the German Air Defense System (412L). Although these respondents carry the same C shred as weapons section personnel in the 412L system, they perform few controlling tasks and thus are clustered with the surveillance personnel from ADCOM.

TABLE 27

PERCENTAGES OF 174X/276X2 JOB GROUPS RESPONDING TO SPECIFIC JOB SATISFACTION INDICATORS

	GROUP 122 (N=98)	GROUP 111 (N=59)	GROUP 081 (N=26)	GROUP 071 (N=14)	GROUP 113 (N=152)	GROUP 065 (N=36)	GROUP 131 (N=10)	GROUP 057 (N=10)	GROUP 004 (N=23)	GROUP 083 (N=20)	GROUP 038 (N=27)	GROUP 089 (N=51)	GROUP 082 (N=25)	GROUP 041 (N=27)	GROUP 037 (N=39)
EXPRESSED JOB INTEREST															
DULL	5	22	8	7	10	11	10	13	22	5	18	6	4	30	33
SO-SO	16	17	11	7	9	14	10	0	4	5	15	8	4	4	23
INTERESTING	79	59	77	86	78	75	80	87	74	90	67	84	92	66	44
NOT REPORTED	0	2	4	0	3	0	0	0	0	0	0	2	0	0	0
PERCEIVED UTILIZATION OF TALENTS															
LITTLE OR NOT AT ALL	32	44	15	29	26	36	30	50	26	20	22	14	16	55	44
FAIRLY WELL OR BETTER	66	56	77	71	74	64	70	50	74	80	78	84	84	45	53
NOT REPORTED	2	0	8	0	0	0	0	0	0	0	0	2	0	0	3
PERCEIVED UTILIZATION OF TRAINING															
LITTLE OR NOT AT ALL	27	37	12	29	18	28	20	88	57	15	26	12	32	48	28
FAIRLY WELL OR BETTER	71	63	84	71	81	72	80	12	43	85	74	86	68	52	72
NOT REPORTED	2	0	4	0	1	0	0	0	0	0	0	2	0	0	0
CAREER INTENTIONS															
PLAN TO SEPARATE	8	9	0	7	8	8	0	0	4	15	0	0	0	11	5
UNDECIDED, PROBABLY SEPARATE	15	15	19	14	16	17	30	0	26	15	4	6	16	8	26
UNDECIDED, PROBABLY STAY	29	34	27	36	26	25	10	0	18	20	15	22	16	59	18
PLAN TO STAY FOR RETIREMENT	47	42	54	43	47	47	50	100	52	50	81	68	68	19	51
NOT RESPONDING	1	0	0	0	3	3	10	0	0	0	0	4	0	3	0
CAREER FIELD INTENTIONS															
PLAN TO STAY IN 17XX	25	17	15	7	30	44	30	25	17	40	67	53	56	37	15
PLAN TO CROSSTRAIN	34	39	42	50	32	17	20	25	57	20	18	24	16	33	44
UNDECIDED	22	20	31	0	17	28	30	12	9	5	4	12	24	11	21
NOT APPLICABLE OR OTHER	19	24	12	43	21	11	20	38	17	35	11	11	4	19	20

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APPENDIX B

GROUP NUMBER AND TITLE: GRP122, 174XA MANUAL SYSTEMS CONTROLLERS

NUMBER IN GROUP: 98 PERCENT OF SAMPLE: 14

MAJCOM DISTRIBUTION: AAC (15%), ADCOM (11%), AFSC (4%), PACAF (9%), TAC (34%), USAFE (23%), OTHERS (4%)

LOCATION: CONUS (45%), OVERSEAS (55%), NOT REPORTED (-)

DAFSC DISTRIBUTION: 1741 (19%), 1744 (81%)

GRADE DISTRIBUTION: O-1 (16%), O-2 (19%), O-3 (63%), O-4 (2%)

AVERAGE TIME IN CAREER FIELD: 53 MONTHS

COMMISSION STATUS: REGULAR (19%), RESERVE (81%)

AERO RATING: NON-RATED (89%), NAVIGATOR (0), PILOT (11%)

AMOUNT OF SUPERVISION: 58 PERCENT SUPERVISE AN AVERAGE OF 4 PERSONS

JOB REQUIRES CONTROLLING AIRCRAFT: YES (92%), NO (6%), NOT RESPONDING (2%)

AVERAGE NUMBER OF TASKS PERFORMED: 171

TIME SPENT ON DUTIES:

DUTY		AVERAGE PERCENT TIME BY ALL MEMBERS
F	PERFORMING MANUAL OR GENERAL AIR CONTROL SYSTEM OPERATIONS FUNCTIONS	48
A	PERFORMING GENERAL COMMAND, ADMINISTRATIVE, OR ADVISORY FUNCTIONS	14
C	PERFORMING SUPERVISORY FUNCTIONS	12
D	PERFORMING TRAINING FUNCTIONS	11

REPRESENTATIVE TASKS:

TASKS		PERCENT MEMBERS PERFORMING
F95	ESTABLISH RADIO CONTACT WITH AIRCREWS	96
F51	DETERMINE HEADINGS MANUALLY USING CURSORS AND RULES OF THUMB	94
F36	CONFIRM ALTITUDE SEPARATIONS	91
F169	VOICETELL OR RT MISSION TACTICS COMMANDS SUCH AS BEARING, RANGE, OR ALTITUDE TO AIRCRAFT	90
F171	VOICETELL ON RT RADAR TARGET POSITIONS TO AIRCRAFT	89
F52	DETERMINE HEADINGS MANUALLY USING VISUAL ESTIMATION	89
A69	PREPARE BRIEFINGS	87
A42	DRAFT WRITTEN CORRESPONDENCE	85
F132	PERFORM CONSOLE OR EQUIPMENT SET-UP OR ADJUSTMENT PROCEDURES ON MANUAL EQUIPMENT PRIOR TO MISSIONS	85
F47	DETERMINE AIR MASS GEOMETRY USING RULES OF THUMB	79

GROUP NUMBER AND TITLE: GRP111, 174XF 407L/485L COMPUTER-ASSISTED SYSTEMS CONTROLLERS

NUMBER IN GROUP: 59 PERCENT OF SAMPLE: 8

MAJCOM DISTRIBUTION: TAC (37%), USAFE (63%)

LOCATION: CONUS (37%), OVERSEAS (63%),

DAFSC DISTRIBUTION: 1741 (36%), 1744 (64%)

GRADE DISTRIBUTION: O-1 (39%), O-2 (29%), O-3 (32%)

AVERAGE TIME IN CAREER FIELD: 35 MONTHS

COMMISSION STATUS: REGULAR (17%), RESERVE (83%)

AERO RATING: NON-RATED (93%), NAVIGATOR (0), PILOT (7%)

AMOUNT OF SUPERVISION: 63 PERCENT SUPERVISE AN AVERAGE OF 4 PERSONS

JOB REQUIRES CONTROLLING AIRCRAFT: YES (100%), NO (0)

AVERAGE NUMBER OF TASKS PERFORMED: 121

TIME SPENT ON DUTIES:

DUTY		AVERAGE PERCENT TIME BY ALL MEMBERS
F	PERFORMING MANUAL OR GENERAL AIR CONTROL SYSTEM OPERATIONS FUNCTIONS	40
I	PERFORMING WEAPONS CONTROLLING FUNCTIONS ON 485L OR 407L COMPUTER-ASSISTED EQUIPMENT	20
A	PERFORMING GENERAL COMMAND, ADMINISTRATIVE, OR ADVISORY FUNCTIONS	11
C	PERFORMING SUPERVISORY FUNCTIONS	8
D	PERFORMING TRAINING FUNCTIONS	8

REPRESENTATIVE TASKS:

TASKS		PERCENT MEMBERS PERFORMING
I17	EXPAND, CONTRACT, OR OFFSET VIDEO DISPLAYS ON 485L OR 407L COMPUTER-ASSISTED CONSOLES	98
I18	INITIATE DROP TRACK ACTIONS VIA 485L OR 407L COMPUTER-ASSISTED CONSOLE ACTIONS	98
I1	ACCEPT, INITIATE ON, OR GAIN COMPUTER ACCESS TO TRACKS USING 485L OR 407L CONSOLES	97
I26	PERFORM 485L OR 407L CONSOLE ACTIONS TO SWITCH MODES	92
I39	UPDATE AIR SPEED, ALTITUDE, OR HEADING OF AIRCRAFT OR TARGETS VIA 485L OR 407L COMPUTER-ASSISTED CONSOLE ACTIONS	91
I15	ENTER DATA VIA 485L OR 407L DATA ENTRY KEYBOARD (DEK) ACTIONS	90
I25	PAIR AIRCRAFT TO TARGETS VIA 485L OR 407L COMPUTER-ASSISTED CONSOLE ACTIONS	88
I19	MODIFY OR OVERRIDE 485L OR 407L COMPUTER-GENERATED TACTICS SOLUTIONS VIA INPUTS TO CONSOLE KEYBOARDS	86
F51	DETERMINE HEADINGS MANUALLY USING CURSORS AND RULES OF THUMB	80
F3	ACCEPT AIRCRAFT FROM AIR TRAFFIC REGULATION CENTER (ATRC) PERSONNEL	80

GROUP NUMBER AND TITLE: GRP081, MANUAL OR 412L SYSTEM CONTROLLERS

NUMBER IN GROUP: 26 PERCENT OF SAMPLE: 4

MAJCOM DISTRIBUTION: AAC (4%), ADCOM (27%), PACAF (12%), TAC (15%), USAFE (39%), OTHER (3%)

LOCATION: CONUS (31%), OVERSEAS (69%)

DAFSC DISTRIBUTION: 1741 (50%), 1744 (50%)

GRADE DISTRIBUTION: O-1 (46%), O-2 (35%), O-3 (15%), NOT REPORTED (4%)

AVERAGE TIME IN CAREER FIELD: 24 MONTHS

COMMISSION STATUS: REGULAR (15%), RESERVE (85%)

AERO RATING: NON-RATED (89%), NAVIGATOR (0), PILOT (8%), NOT REPORTED (3%)

AMOUNT OF SUPERVISION: 39 PERCENT SUPERVISE AN AVERAGE OF 3 PEOPLE

JOB REQUIRES CONTROLLING AIRCRAFT: YES (100%), NO (0)

AVERAGE NUMBER OF TASKS PERFORMED: 68

TIME SPENT ON DUTIES:

DUTY		AVERAGE PERCENT TIME BY ALL MEMBERS
F	PERFORMING MANUAL OR GENERAL AIR CONTROL SYSTEM OPERATIONS FUNCTIONS	70
A	PERFORMING GENERAL COMMAND, ADMINISTRATIVE, OR ADVISORY FUNCTIONS	7
J	PERFORMING WEAPONS CONTROLLING FUNCTIONS ON 412L SYSTEMS	6
C	PERFORMING SUPERVISORY FUNCTIONS	6

REPRESENTATIVE TASKS:

TASKS		PERCENT MEMBERS PERFORMING
F114	IDENTIFY AIRCRAFT VIA IDENTIFICATION FRIEND OR FOE-SELECTIVE IDENTIFICATION FEATURE (IFF-SIF) PROCEDURES	92
F63	DIRECT AIRCRAFT TO CHANGE RADIO FREQUENCIES	92
F47	DETERMINE AIR MASS GEOMETRY USING RULES OF THUMB	88
F169	VOICETELL OR RT MISSION TACTICS COMMANDS SUCH AS BEARING, RANGE, OR ALTITUDE TO AIRCRAFT	81
F51	DETERMINE HEADINGS MANUALLY USING CURSORS AND RULES OF THUMB	77
F6	ACCEPT AIRCRAFT FROM RADAR APPROACH CONTROL (RAPCON)	73
F53	DETERMINE HEADINGS USING AIR MASS POSITION INDICATORS (AMPI) OR HANDY-AIDS	73
F109	HAND AIRCRAFT OFF TO ALLIED NATION AIR TRAFFIC AGENCIES	38
F118	MONITOR BUFFER ZONES USING MANUAL SYSTEMS OR EQUIPMENT IN A MANUAL MODE	38
J16	MODIFY OR OVERRIDE 412L COMPUTER-GENERATED TACTICS SOLUTIONS VIA CONSOLE KEYBOARD INPUTS	31

GROUP NUMBER AND TITLE: GRP71, 174XE 416M (BUIC) SYSTEM CONTROLLERS

NUMBER IN GROUP: 11 PERCENT OF SAMPLE: 2

MAJCOM DISTRIBUTION: ADCOM (71%), AFSC (22%), USAFE (7%)

LOCATION: CONUS (71%), OVERSEAS (29%)

DAFSC DISTRIBUTION: 1741 (14%), 1744 (86%)

GRADE DISTRIBUTION: O-1 (29%), O-2 (14%), O-3 (50%), NOT RESPONDING (7%)

AVERAGE TIME IN CAREER FIELD: 44 MONTHS

COMMISSION STATUS: REGULAR (7%), RESERVE (93%)

AERO RATING: NON-RATED (86%), NAVIGATOR (0), PILOT (14%)

AMOUNT OF SUPERVISION: 14 PERCENT SUPERVISE AN AVERAGE OF 2 PEOPLE

JOB REQUIRES CONTROLLING AIRCRAFT: YES (93%), NO (7%)

AVERAGE NUMBER OF TASKS PERFORMED: 95

TIME SPENT ON DUTIES:

DUTY	AVERAGE PERCENT TIME BY ALL MEMBERS
F PERFORMING MANUAL OR GENERAL AIR CONTROL SYSTEM OPERATIONS FUNCTIONS	46
H PERFORMING WEAPONS CONTROLLING FUNCTIONS ON 416M (BUIC) SYSTEMS	24
A PERFORMING GENERAL COMMAND, ADMINISTRATIVE, OR ADVISORY FUNCTIONS	9
C PERFORMING SUPERVISORY FUNCTIONS	8

REPRESENTATIVE TASKS:

TASKS	PERCENT MEMBERS PERFORMING
H26 REINITIATE ON TRACKS VIA 416M BUIC CONSOLE ACTIONS	93
H24 PERFORM VECTORING PROCEDURES USING 416M BUIC COMPUTER-GENERATED SOLUTIONS	86
F6 ACCEPT AIRCRAFT FROM RADAR APPROACH CONTROL (RAPCON)	86
H12 ENTER DATA VIA 416M BUIC CONSOLE KEYBOARDS	86
H8 COMPUTE OR UPDATE AIR SPEED, ALTITUDE, OR HEADING OF AIRCRAFT OR TARGET USING 416M BUIC EQUIPMENT	79
H25 RECALL DATA VIA 416M BUIC CONSOLE SWITCH ACTIONS	79
F110 HAND AIRCRAFT OFF TO FAA CONTROLLERS	79
H15 INITIATE DROP TRACK ACTIONS VIA 416M BUIC CONSOLE ACTIONS	79
H16 MODIFY OR OVERRIDE 416M BUIC COMPUTER-GENERATED TACTICS SOLUTIONS VIA CONSOLE ACTIONS	71
F52 DETERMINE HEADINGS MANUALLY USING VISUAL ESTIMATION	71

GROUP NUMBER AND TITLE: GRP113, 174XB/276X2 416L SAGE SYSTEM CONTROLLERS

NUMBER IN GROUP: 152 PERCENT OF SAMPLE: 21

MAJCOM DISTRIBUTION: AAC (1%), ADCOM (99%)

LOCATION: CONUS (94%), OVERSEAS (6%)

DAFSC DISTRIBUTION: 1741 (38%), 1744 (28%), 27632 (5%), 27672 (22%), OTHER 276XX (7%)

GRADE DISTRIBUTION: O-1 (41%), O-2 (5%), O-3 (20%); E-4 (5%), E-5 (16%), E-6 (8%), E-7 (5%)

AVERAGE TIME IN CAREER FIELD: 46 MONTHS

COMMISSION STATUS: REGULAR (9%), RESERVE (57%), NOT COMMISSIONED (34%)

AERO RATING: NON-RATED (60%), NAVIGATOR (1%), PILOT (5%), ENLISTED, NON-RATED (34%)

AMOUNT OF SUPERVISION: 42 PERCENT SUPERVISE AN AVERAGE OF 4 PEOPLE

JOB REQUIRES CONTROLLING AIRCRAFT: YES (99%), NO (0), NOT RESPONDING (1%)

AVERAGE NUMBER OF TASKS PERFORMED: 73

TIME SPENT ON DUTIES:

DUTY		AVERAGE PERCENT TIME BY ALL MEMBERS
F	PERFORMING MANUAL OR GENERAL AIR CONTROL SYSTEM OPERATIONS FUNCTIONS	40
G	PERFORMING WEAPONS CONTROLLING FUNCTIONS ON 416L (SAGE) SYSTEMS	37
C	PERFORMING SUPERVISORY FUNCTIONS	6
D	PERFORMING TRAINING FUNCTIONS	6

REPRESENTATIVE TASKS:

TASKS		PERCENT MEMBERS PERFORMING
G23	PAIR AIRCRAFT TO TARGETS ON 416L SAGE EQUIPMENT VIA CONSOLE INPUTS	100
G16	EXPAND, CONTRACT, OR OFFSET VIDEO DISPLAYS ON 416L SAGE SYSTEMS	97
G18	MODIFY OR OVERRIDE 416L SAGE COMPUTER-GENERATED TACTICS SOLUTIONS VIA CONSOLE ACTIONS	96
G15	EVALUATE 416L SAGE COMPUTER-GENERATED TACTICS SOLUTIONS	93
G29	PERFORM VECTORING PROCEDURES USING 416L SAGE COMPUTER-GENERATED SOLUTIONS	91
G1	ACCEPT ASSIGNED TRACKS USING 416L SAGE CONSOLES	87
G22	MONITOR PACE FLIGHTS USING 416L SAGE EQUIPMENT	84
F36	CONFIRM ALTITUDE SEPARATIONS	80
F110	HAND AIRCRAFT OFF TO FAA CONROLLERS	76
G6	CHANGE RADIO FREQUENCIES ON 416L SAGE COMMUNICATIONS EQUIPMENT	74

GROUP NUMBER AND TITLE: GRP065, E-3A (SENTRY) AIRBORNE WEAPONS CONTROLLERS AND SURVEILLANCE PERSONNEL

NUMBER IN GROUP: 36 PERCENT OF SAMPLE: 5

MAJCOM DISTRIBUTION: TAC (100%)

LOCATION: CONUS (100%), OVERSEAS (0)

DAFSC DISTRIBUTION: 1741 (25%), 1744 (75%)

GRADE DISTRIBUTION: O-2 (14%), O-3 (86%)

AVERAGE TIME IN CAREER FIELD: 76 MONTHS

COMMISSION STATUS: REGULAR (33%), RESERVE (67%)

AERO RATING: NON-RATED (97%), NAVIGATOR (-), PILOT (-), NOT RESPONDING (3%)

AMOUNT OF SUPERVISION: 36 PERCENT SUPERVISE AN AVERAGE OF 3 PEOPLE

JOB REQUIRES CONTROLLING AIRCRAFT: YES (75), NO (25)

AVERAGE NUMBER OF TASKS PERFORMED: 72

TIME SPENT ON DUTIES:

DUTY		AVERAGE PERCENT TIME BY ALL MEMBERS
P	PERFORMING AIRBORNE WEAPONS CONTROLLING AND SURVEILLANCE FUNCTIONS	42
F	PERFORMING MANUAL OR GENERAL AIR CONTROL SYSTEM OPERATIONS FUNCTIONS	21
D	PERFORMING TRAINING FUNCTIONS	11
A	PERFORMING GENERAL COMMAND, ADMINISTRATIVE, OR ADVISORY FUNCTIONS	10
C	PERFORMING SUPERVISORY FUNCTIONS	5

REPRESENTATIVE TASKS:

TASKS		PERCENT MEMBERS PERFORMING
P15	EXPAND, CONTRACT, OR OFFSET VIDEO DISPLAYS ON 411L (E-3A) CONSOLE	100
P12	ENTER DATA VIA 411L CONSOLE KEYBOARD ACTIONS	97
P17	INITIATE ON TRACKS USING 411L (E-3A) CONSOLES	97
P16	IDENTIFY OR REPORT E-3A SYSTEM ANOMALIES OR DEFICIENCIES	94
P11	DROP TRACKS VIA 411L (E-3A) CONSOLE ACTIONS	94
P34	PERFORM OR PRACTICE LIFE SUPPORT EQUIPMENT OPERATIONS	89
P45	RECALL DATA VIA 411L (E-3A) CONSOLE SWITCH ACTIONS	89
P5	COMPUTE OR UPDATE AIR SPEED AND HEADING OF AIRCRAFT OR TARGETS USING 411L (E-3A) EQUIPMENT	83
P43	PRACTICE OR PERFORM EMERGENCY PROCEDURES SUCH AS BAIL-OUT, CRASH LANDING, DITCHING, OR FUEL DUMPING	75
P39	PERFORM SWITCH ACTIONS TO DISPLAY SURVEILLANCE DATA TO E-3A CREWS	44

GROUP NUMBER AND TITLE: GRP131, ADVISORS TO AIR NATIONAL GUARD AND RESERVE UNITS

NUMBER IN GROUP: 10 PERCENT OF SAMPLE: 1

MAJCOM DISTRIBUTION: TAC (100%)

LOCATION: CONUS (90%), OVERSEAS (10%)

DAFSC DISTRIBUTION: 1741 (10%), 1744 (90%)

GRADE DISTRIBUTION: O-3 (90%), O-4 (10%)

AVERAGE TIME IN CAREER FIELD: 97 MONTHS

COMMISSION STATUS: REGULAR (0), RESERVE (100%)

AERO RATING: NON-RATED (90%), NAVIGATOR (0), PILOT (10%)

AMOUNT OF SUPERVISION: 20 PERCENT SUPERVISE AN AVERAGE OF 2 PEOPLE

JOB REQUIRES CONTROLLING AIRCRAFT: YES (90%), NO (10%)

AVERAGE NUMBER OF TASKS PERFORMED: 97

TIME SPENT ON DUTIES:

DUTY		AVERAGE PERCENT TIME BY ALL MEMBERS
A	PERFORMING GENERAL COMMAND, ADMINISTRATIVE, OR ADVISORY FUNCTIONS	26
F	PERFORMING MANUAL OR GENERAL AIR CONTROL SYSTEM OPERATIONS FUNCTIONS	25
D	PERFORMING TRAINING FUNCTIONS	15
C	PERFORMING SUPERVISORY FUNCTIONS	13
I	PERFORMING WEAPONS CONTROLLING FUNCTIONS	7

REPRESENTATIVE TASKS:

TASKS		PERCENT MEMBERS PERFORMING
A42	DRAFT WRITTEN CORRESPONDENCE	100
C51	PARTICIPATE IN STAFF MEETINGS	100
A2	ADVISE AIR FORCE RESERVE OR AIR NATIONAL GUARD UNITS ON WEAPONS CONTROLLER ACTIVITIES	90
A43	ESTABLISH OR REVISE FILE MAINTENANCE OR DISPOSITION PLANS	90
A4	ADVISE COMMANDER OR STAFF AGENCIES ON MATTERS, SUCH AS CAPABILITIES, PROCEDURES, OR PROGRAMS	90
A9	COORDINATE WITH HIGHER HEADQUARTERS ON POLICIES, PROCEDURES, OR PUBLICATIONS	90
D46	EVALUATE RESERVE FORCES UNIT TRAINING ACTIVITIES	80
A82	REVIEW, APPROVE, OR DISAPPROVE REPLIES TO EVALUATION OR INSPECTION REPORTS SUCH AS ORI	80
F171	VOICETELL OR RT RADAR TARGET POSITIONS TO AIRCRAFT	80
C12	DEVELOP OR IMPROVE WORK METHODS OR PROCEDURES	70

GROUP NUMBER AND TITLE: GRP057, 174XA AIRBORNE COMMAND AND CONTROL CENTER CONTROLLERS

NUMBER IN GROUP: 10 PERCENT OF SAMPLE: 1

MAJCOM DISTRIBUTION: TAC (100%)

LOCATION: CONUS (100%), OVERSEAS (0)

DAFSC DISTRIBUTION: 1741 (20%), 1744 (80%)

GRADE DISTRIBUTION: O-1 (20%), O-3 (80%)

AVERAGE TIME IN CAREER FIELD: 59 MONTHS

COMMISSION STATUS: REGULAR (30%), RESERVE (70%)

AERO RATING: NON-RATED (60%), NAVIGATOR (10%), PILOT (30%)

AMOUNT OF SUPERVISION: 70 PERCENT SUPERVISE AN AVERAGE OF 3 PEOPLE

JOB REQUIRES CONTROLLING AIRCRAFT: YES (80%), NO (20%)

AVERAGE NUMBER OF TASKS PERFORMED: 69

TIME SPENT ON DUTIES:

DUTY		AVERAGE PERCENT TIME BY ALL MEMBERS
F	PERFORMING MANUAL OR GENERAL AIR CONTROL SYSTEM OPERATIONS FUNCTIONS	61
A	PERFORMING GENERAL COMMAND, ADMINISTRATIVE, OR ADVISORY FUNCTIONS	12
C	PERFORMING SUPERVISORY FUNCTIONS	7
P	PERFORMING AIRBORNE WEAPONS CONTROLLING AND SURVEILLANCE FUNCTIONS	7

REPRESENTATIVE TASKS:

TASKS		PERCENT MEMBERS PERFORMING
F95	ESTABLISH RADIO CONTACT WITH AIRCREWS	100
F27	BREAK DOWN FRAG ORDERS	100
F25	AUTHENTICATE VOICE COMMUNICATION MESSAGES USING AUTHENTICATION TABLES	90
F131	PERFORM COMMUNICATION CHECKS	90
F160	UPDATE PLOTTING BOARDS	80
F65	DIRECT AIRCRAFT TO TERMINATE MISSIONS OR RETURN TO BASE	80
P35	PERFORM PLOTTER OPERATIONS ABOARD AIRBORNE COMMAND AND CONTROL CENTER (ABCCC) AIRCRAFT	70
F15	ANALYZE MISSION INFORMATION PROVIDED ON STATUS DISPLAY BOARDS	70
F161	UPDATE STATUS DISPLAY BOARDS	70
P34	PERFORM OR PRACTICE LIFE SUPPORT EQUIPMENT OPERATIONS	60

GROUP NUMBER AND TITLE: GRP084, MOBILITY SUPPORT OFFICERS

NUMBER IN GROUP: 23 PERCENT OF SAMPLE: 3

MAJCOM DISTRIBUTION: TAC (35%), USAFE (65%)

LOCATION: CONUS (35%), OVERSEAS (65%)

DAFSC DISTRIBUTION: 1741 (22%), 1744 (78%)

GRADE DISTRIBUTION: O-1 (30%), O-2 (22%), O-3 (48%)

AVERAGE TIME IN CAREER FIELD: 39 MONTHS

COMMISSION STATUS: REGULAR (13%), RESERVE (87%)

AERO RATING: NON-RATED (91%), NAVIGATOR (0), PILOT (9%)

AMOUNT OF SUPERVISION: 70 PERCENT SUPERVISE AN AVERAGE OF 4 PEOPLE

JOB REQUIRES CONTROLLING AIRCRAFT: YES (74%), NO (26%)

AVERAGE NUMBER OF TASKS PERFORMED: 102

TIME SPENT ON DUTIES:

DUTY		AVERAGE PERCENT TIME BY ALL MEMBERS
S	PERFORMING MOBILITY FUNCTIONS	36
A	PERFORMING GENERAL COMMAND, ADMINISTRATIVE, OR ADVISORY FUNCTIONS	19
F	PERFORMING MANUAL OR GENERAL AIR CONTROL SYSTEM OPERATIONS FUNCTIONS	17
C	PERFORMING SUPERVISORY FUNCTIONS	11
D	PERFORMING TRAINING FUNCTIONS	6

REPRESENTATIVE TASKS:

TASKS		PERCENT MEMBERS PERFORMING
S25	REVIEW MOBILITY STATUS OF PERSONNEL SUBJECT TO DEPLOYMENT	96
S10	COORDINATE WITH BASE OR HOST AGENCIES ON MOBILITY SUPPORT	96
S9	COORDINATE UNIT MOBILITY STATUS WITH UNIT COMMANDER OR STAFF	91
S24	REVIEW MOBILITY STATUS OF MATERIAL SUBJECT TO DEPLOYMENT	87
S15	DEVELOP UNIT MOBILITY SCHEDULES	87
S17	DIRECT DOCUMENTATION, IDENTIFICATION, OR PACKAGING OF MOBILITY MATERIALS	87
S6	CONDUCT MOBILITY TRAINING PROGRAMS TO FAMILIARIZE UNIT PERSONNEL WITH MOBILITY PLANS OR SPECIFIC RESPONSIBILITIES	87
S29	PERFORM LIAISON ACTIONS WITH WING MOBILITY CONTROL CENTER DURING MOBILITY OPERATIONS	83
S38	SUPERVISE AIR AND GROUND MOVEMENT OF MOBILITY INCREMENTS AND TROOPS	83
S18	DIRECT LOCATION, ERECTION, OR DISASSEMBLY OF EQUIPMENT OR FACILITIES AT DEPLOYMENT AREAS OR ON RETURN TO GARRISON	78

GROUP NUMBER AND TITLE: GRP083, OPERATIONS TRAINING, INSTRUCTIONAL SYSTEMS AND TRAINING DEVELOPMENT PERSONNEL

NUMBER IN GROUP: 20 PERCENT OF SAMPLE: 3

MAJCOM DISTRIBUTION: ADCOM (20%), PACAF (5%), TAC (50%), USAFE (25%)

LOCATION: CONUS (70%), OVERSEAS (30%)

DAFSC DISTRIBUTION: 1741 (5%), 1744 (90%); 27692 (5%)

GRADE DISTRIBUTION: O-2 (5%), O-3 (80%), O-4 (10%); E-8 (5%)

AVERAGE TIME IN CAREER FIELD: 86 MONTHS

COMMISSION STATUS: REGULAR (25%), RESERVE (70%), NOT COMMISSIONED (5%)

AERO RATING: NON-RATED (85%), NAVIGATOR (0), PILOT (10%), ENLISTED, NOT RATED (5%)

AMOUNT OF SUPERVISION: 75 PERCENT SUPERVISE AN AVERAGE OF 3 PEOPLE

JOB REQUIRES CONTROLLING AIRCRAFT: YES (50%), NO (50%)

AVERAGE NUMBER OF TASKS PERFORMED: 93

TIME SPENT ON DUTIES:

DUTY		AVERAGE PERCENT TIME BY ALL MEMBERS
D	PERFORMING TRAINING FUNCTIONS	42
A	PERFORMING GENERAL COMMAND, ADMINISTRATIVE, OR ADVISORY FUNCTIONS	19
C	PERFORMING SUPERVISORY FUNCTIONS	14
F	PERFORMING MANUAL OR GENERAL AIR CONTROL SYSTEM OPERATIONS FUNCTIONS	9
I	PERFORMING WEAPONS CONTROLLING FUNCTIONS ON 485L OR 407L COMPUTER-ASSISTED EQUIPMENT	5

REPRESENTATIVE TASKS:

TASKS		PERCENT MEMBERS PERFORMING
A4	ADVISE COMMANDER OR STAFF AGENCIES ON MATTERS, SUCH AS CAPABILITIES, PROCEDURES, OR PROGRAMS	95
A21	DEVELOP, WRITE, OR OBTAIN COORDINATION ON DIRECTIVES SUCH AS OI, REGULATIONS, OR CHECKLISTS	95
D27	DEVELOP FORMAL CLASSROOM TRAINING PROGRAMS OR COURSES OF INSTRUCTION	85
D25	DETERMINE OPERATIONAL PROFICIENCY TRAINING REQUIREMENTS OR STUDENT PERFORMANCE STANDARDS	85
D26	DETERMINE TRAINING OBJECTIVES	80
D55	REVIEW, APPROVE, OR DISAPPROVE LESSON PLANS	80
A71	PREPARE OR DEVELOP AUDIO-VISUAL OR OTHER COMMUNICATIONS AIDS	80
D28	DEVELOP OR CONSTRUCT TESTS	80
C12	DEVELOP OR IMPROVE WORK METHODS OR PROCEDURES	75
D64	WRITE LESSON PLANS	75

GROUP NUMBER AND TITLE: GRP038, NCOICs OR OICs OF CONTROL CENTER SECTIONS OR CREWS

NUMBER IN GROUP: 27 PERCENT OF SAMPLE: 4

MAJCOM DISTRIBUTION: ADCOM (62%), PACAF (4%), TAC (4%), USAFE (30%)

LOCATION: CONUS (59%), OVERSEAS (41%), NOT REPORTED (0)

DAFSC DISTRIBUTION: 1741 (7%). 1744 (45%), 27692 (48%)

GRADE DISTRIBUTION: E-7 (18%), E-8 (15%), E-9 (15%), O-2 (4%), O-3 (48%)

AVERAGE TIME IN CAREER FIELD: 178 MONTHS

COMMISSION STATUS: REGULAR (26%), RESERVE (26%), NOT APPLICABLE (48%)

AERO RATING: NON-RATED (41%), NAVIGATOR (4%), PILOT (7%), NOT APPLICABLE (48%)

AMOUNT OF SUPERVISION: 82 PERCENT SUPERVISE AN AVERAGE OF 4 PEOPLE

JOB REQUIRES CONTROLLING AIRCRAFT: YES (26%), NO (70%), NOT RESPONDING (4%)

AVERAGE NUMBER OF TASKS PERFORMED: 60

TIME SPENT ON DUTIES:

DUTY		AVERAGE PERCENT TIME BY ALL MEMBERS
C	PERFORMING SUPERVISORY FUNCTIONS	31
A	PERFORMING GENERAL COMMAND, ADMINISTRATIVE, OR ADVISORY FUNCTIONS	28
D	PERFORMING TRAINING FUNCTIONS	13
F	PERFORMING MANUAL OR GENERAL AIR CONTROL SYSTEM OPERATIONS FUNCTIONS	12
R	PERFORMING COMMAND AND CONTROL CENTER FUNCTIONS	4

REPRESENTATIVE TASKS:

TASKS		PERCENT MEMBERS PERFORMING
C113	WRITE OR ENDORSE AIRMAN PERFORMANCE REPORTS (APR)	89
C70	SUPERVISE AEROSPACE CONTROL AND WARNING SYSTEMS TECHNICIANS (AFS 27670)	85
C1	ASSIGN PERSONNEL TO DUTY POSITIONS	78
A21	DEVELOP, WRITE, OR OBTAIN COORDINATION ON DIRECTIVES, SUCH AS OI, REGULATIONS, OR CHECKLISTS	78
C9	COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	78
C116	WRITE OR ENDORSE RECOMMENDATIONS FOR AWARDS OR DECORATIONS	78
A42	DRAFT WRITTEN CORRESPONDENCE	78
C52	REVIEW, APPROVE, OR DISAPPROVE CREW DUTY SCHEDULES	67
A5	APPROVE OR DISAPPROVE DIRECTIVES, SUCH AS OPERATING INSTRUCTIONS (OI), REGULATIONS, OR CHECKLISTS	60
A4	ADVISE COMMANDER OR STAFF AGENCIES ON MATTERS, SUCH AS CAPABILITIES, PROCEDURES, OR PROGRAMS	56

GROUP NUMBER AND TITLE: GRP089, BRANCH CHIEFS OR STAFF OFFICERS AT GROUP, WING, OR MAJCOM LEVEL

NUMBER IN GROUP: 51 PERCENT OF SAMPLE: 7

MAJCOM DISTRIBUTION: AAC (6%), ADCOM (24%), PACAF (14%), TAC (18%), USAFE (31%), OTHERS (7%)

LOCATION: CONUS (43%), OVERSEAS (55%), NOT REPORTED (2%)

DAFSC DISTRIBUTION: 1741 (4%), 1744 (92%), 27692 (2%), OTHER (2%)

GRADE DISTRIBUTION: O-2 (4%), O-3 (82%), O-4 (10%), E-8 (2%), NOT RESPONDING (2%)

AVERAGE TIME IN CAREER FIELD: 105 MONTHS

COMMISSION STATUS: REGULAR (45%), RESERVE (53%), ENLISTED (2%)

AERO RATING: NON-RATED (90%), NAVIGATOR (2%), PILOT (6%), ENLISTED, NOT RATED (2%)

AMOUNT OF SUPERVISION: 59 PERCENT SUPERVISE AN AVERAGE OF 2 PEOPLE

JOB REQUIRES CONTROLLING AIRCRAFT: YES (18%), NO (80%), NOT RESPONDING (2%)

AVERAGE NUMBER OF TASKS PERFORMED: 91

TIME SPENT ON DUTIES:

DUTY		AVERAGE PERCENT TIME BY ALL MEMBERS
A	PERFORMING GENERAL COMMAND, ADMINISTRATIVE, OR ADVISORY FUNCTIONS	37
T	PERFORMING INSPECTION, EVALUATION, AND SYSTEMS OR EXERCISE DEVELOPMENT FUNCTIONS	17
C	PERFORMING SUPERVISORY FUNCTIONS	15
D	PERFORMING TRAINING FUNCTIONS	12
F	PERFORMING MANUAL OR GENERAL AIR CONTROL SYSTEM OPERATIONS FUNCTIONS	7

REPRESENTATIVE TASKS:

TASKS		PERCENT MEMBERS PERFORMING
A42	DRAFT WRITTEN CORRESPONDNECE	100
A21	DEVELOP, WRITE OR OBTAIN COORDINATION ON DIRECTIVES, SUCH AS OI, REGULATIONS, OR CHECKLISTS	96
A4	ADVISE COMMANDER OR STAFF AGENCIES ON MATTERS, SUCH AS CAPABILITIES, PROCEDURES, OR PROGRAMS	94
A69	PREPARE BRIEFINGS	94
A33	DRAFT INPUTS FOR OPERATING GUIDES OR PUBLICATIONS, SUCH AS MANUALS, REGULATIONS, OR PAMPHLETS	92
A9	COORDINATE WITH HIGHER HEADQUARTERS ON POLICIES, PROCEDURES, OR PUBLICATIONS	92
A6	COMPILE OR EVALUATE INFORMATION FOR STAFF STUDIES	88
A38	DRAFT POSITION OR TALKING PAPERS	86
A7	CONDUCT FORMAL, NON-CREW-DUTY BRIEFINGS	76
A66	PERFORM STAFF ASSISTANCE VISITS	69

GROUP NUMBER AND TITLE: GRP082, CENTER, WING, OR MAJCOM PLANS AND SPECIAL PROJECTS PERSONNEL

NUMBER IN GROUP: 25 PERCENT OF SAMPLE: 4

MAJCOM DISTRIBUTION: AAC (12%), ADCOM (20%), AFSC (4%), TAC (28%), USAFE (16%), HQ USAF (8%), OTHER (12%)

LOCATION: CONUS (56%), OVERSEAS (44%)

DAFSC DISTRIBUTION: 1741 (4%), 1744 (93%), NOT RESPONDING (3%)

GRADE DISTRIBUTION: O-1 (4%), O-3 (92%), O-4 (4%)

AVERAGE TIME IN CAREER FIELD: 100 MONTHS

COMMISSION STATUS: REGULAR (36%), RESERVE (64%)

AERO RATING: NON-RATED (100%), NAVIGATOR (0), PILOT (0)

AMOUNT OF SUPERVISION: 12 PERCENT SUPERVISE AN AVERAGE OF 1 PERSON

JOB REQUIRES CONTROLLING AIRCRAFT: YES (8%), NO (92%)

AVERAGE NUMBER OF TASKS PERFORMED: 28

TIME SPENT ON DUTIES:

DUTY		AVERAGE PERCENT TIME BY ALL MEMBERS
A	PERFORMING GENERAL COMMAND, ADMINISTRATIVE, OR ADVISORY FUNCTIONS	61
B	PLANNING AND PROGRAMMING	15
C	PERFORMING SUPERVISORY FUNCTIONS	9

REPRESENTATIVE TASKS:

TASKS		PERCENT MEMBERS PERFORMING
A4	ADVISE COMMANDER OR STAFF AGENCIES ON MATTERS SUCH AS CAPABILITIES, PROCEDURES, OR PROGRAMS	88
A69	PREPARE BRIEFINGS	84
A38	DRAFT POSITION OR TALKING PAPERS	84
B1	ANALYZE LONG-RANGE REQUIREMENTS FOR AIR CONTROL SYSTEM OPERATIONS	72
A6	COMPILE OR EVALUATE INFORMATION FOR STAFF STUDIES	72
A41	DRAFT STAFF STUDY REPORTS	68
A33	DRAFT INPUTS FOR OPERATING GUIDES OR PUBLICATIONS, SUCH AS MANUALS, REGULATIONS, OR PAMPHLETS	64
A7	CONDUCT FORMAL, NON-CREW-DUTY BRIEFINGS	60
B2	DETERMINE EQUIPMENT, FACILITIES, SUBSYSTEMS, OR SYSTEMS REQUIRED TO SUPPORT OPERATIONS PLANS	56
B3	DETERMINE EQUIPMENT, FACILITIES, SUBSYSTEMS, OR SYSTEMS REQUIRED TO SUPPORT WAR OR CONTINGENCY PLANS	52

GROUP NUMBER AND TITLE: GRP041, COMMAND AND CONTROL CENTER DUTY OFFICERS

NUMBER IN GROUP: 27 PERCENT OF SAMPLE: 4

MAJCOM DISTRIBUTION: AAC (15%), ADCOM (30%), HQ USAF (3%), PACAF (48%), USAFE (4%)

LOCATION: CONUS (22%), OVERSEAS (74%), NOT REPORTED (4%)

DAFSC DISTRIBUTION: 1741 (4%), 1744 (92%), 27692 (4%)

GRADE DISTRIBUTION: O-2 (19%), O-3(67%), O-4 (7%), E-7 (4%), NOT RESPONDING (3%)

AVERAGE TIME IN CAREER FIELD: 81 MONTHS

COMMISSION STATUS: REGULAR (36%), RESERVE (52%), NOT COMMISSIONED (12%)

AERO RATING: NON-RATED (92%), NAVIGATOR (0), PILOT (4%), ENLISTED, NON-RATED (4%)

AMOUNT OF SUPERVISION: 48% SUPERVISE AN AVERAGE OF 3 PEOPLE

JOB REQUIRES CONTROLLING AIRCRAFT: YES (0), NO (93%), NOT RESPONDING (7%)

AVERAGE NUMBER OF TASKS PERFORMED: 61

TIME SPENT ON DUTIES:

DUTY		AVERAGE PERCENT TIME BY ALL MEMBERS
F	PERFORMING MANUAL OR GENERAL AIR CONTROL SYSTEM OPERATIONS FUNCTIONS	38
A	PERFORMING GENERAL COMMAND, ADMINISTRATIVE OR ADVISORY FUNCTIONS	20
R	PERFORMING COMMAND AND CONTROL CENTER FUNCTIONS	13
C	PERFORMING SUPERVISORY FUNCTIONS	10
D	PERFORMING TRAINING FUNCTIONS	6

REPRESENTATIVE TASKS:

TASKS		PERCENT MEMBERS PERFORMING
F145	RECEIVE OR RECORD INTELLIGENCE INFORMATION	89
F46	DECODE OR ENCODE MESSAGES	89
A51	INVENTORY CLASSIFIED DOCUMENTS OR INFORMATION	78
F25	AUTHENTICATE VOICE COMMUNICATION MESSAGES USING AUTHENTICATION TABLES	78
A36	DRAFT MESSAGES FOR ELECTRICAL TRANSMISSION	78
A4	ADVISE COMMANDER OR STAFF AGENCIES ON MATTERS, SUCH AS CAPABILITIES, PROCEDURES, OR PROGRAMS	70
F149	RELAY MISSION INFORMATION TO HIGHER OPERATIONAL CENTERS	67
F66	DIRECT ALERT FIGHTER AIRCRAFT TO SCRAMBLE	67
F123	MONITOR OR EVALUATE STATUS DISPLAY BOARD ACTIVITIES TO INSURE CORRECTNESS OF INFORMATION DISPLAYED	63
F97	EVALUATE DISPLAYED THREAT ON A REAL-TIME BASIS	56

GROUP NUMBER AND TITLE: GRP037, 174X D/C SURVEILLANCE AND ECCM PERSONNEL

NUMBER IN GROUP: 39 PERCENT OF SAMPLE: 6

MAJCOM DISTRIBUTION: ADCOM (64%), USAFE (33%), OTHER (3%)

LOCATION: CONUS (64%), OVERSEAS (36%)

DAFSC DISTRIBUTION: 1741 (23%), 1744 (74%), NOT REPORTED (3%)

GRADE DISTRIBUTION: O-1 (15%), O-2 (41%), O-3 (41%), NOT REPORTED (3%)

AVERAGE TIME IN CAREER FIELD: 47 MONTHS

COMMISSION STATUS: REGULAR (10%), RESERVE (90%)

AERO RATING: NON-RATED (95%), NAVIGATOR (0), PILOT (5%)

AMOUNT OF SUPERVISION: 67 PERCENT SUPERVISE AN AVERAGE OF 4 PEOPLE

JOB REQUIRES CONTROLLING AIRCRAFT: YES (8%), NO (92%)

AVERAGE NUMBER OF TASKS PERFORMED: 90

TIME SPENT ON DUTIES:

DUTY		AVERAGE PERCENT TIME BY ALL MEMBERS
K	PERFORMING GENERAL SURVEILLANCE AND ELECTRONIC COUNTER-COUNTERMEASURES FUNCTIONS	42
F	PERFORMING MANUAL OR GENERAL AIR CONTROL SYSTEM OPERATIONS FUNCTIONS	13
C	PERFORMING SUPERVISORY FUNCTIONS	10
L	PERFORMING SURVEILLANCE AND ELECTRONIC COUNTER-COUNTERMEASURES FUNCTIONS IN 416L (SAGE) SYSTEMS	8
A	PERFORMING GENERAL COMMAND, ADMINISTRATIVE, OR ADVISORY FUNCTIONS	7
D	PERFORMING TRAINING FUNCTIONS	4
J	PERFORMING WEAPONS CONTROLLING FUNCTIONS ON 412L SYSTEMS	3

REPRESENTATIVE TASKS:

TASKS		PERCENT MEMBERS PERFORMING
K47	IDENTIFY RADAR IS MALFUNCTIONING CONDITIONS	82
K30	DIRECT IMPLEMENTATION OR CHANGES OF CLUTTER ELIMINATION FIXES	79
K6	AUTHORIZE OR CONCUR WITH ELECTRONIC COUNTER-COUNTERMEASURES (ECCM) ACTIONS OF AJO OR RADAR MAINTENANCE PERSONNEL	79
K46	IDENTIFY SURVEILLANCE OR ECCM EQUIPMENT IS MALFUNCTIONING CONDITIONS	79
K3	ANALYZE JAMMING INFORMATION PROVIDED BY LONG RANGE RADAR AJO OR RADAR MAINTENANCE PERSONNEL	77
K65	REPORT EQUIPMENT MALFUNCTIONS TO MAINTENANCE PERSONNEL	74
K8	COORDINATE RADAR COVERAGE WITH ADJOINING CONTROL CENTERS DURING NORMAL OPERATIONS	74
K37	DIRECT RADAR SITE STATUS CHANGES	72
K10	COORDINATE RADAR COVERAGE WITH WEAPONS SECTION PERSONNEL	69
K4	ANALYZE RANDOM ACCESS PLANNED POSITION INDICATOR (RAPPI) DATA FOR QUALITY OR QUANTITY OF DATA	69