

Air Education and Training Command

Sustaining the Combat Capability of America's Air Force



U.S. AIR FORCE

Occupational Survey Report AFSC 1C1X1 Air Traffic Control

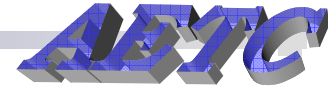
Lt Kimberly McCoy
1 October 2004

Integrity - Service - Excellence

Report Documentation Page				Form Approved OMB No. 0704-0188	
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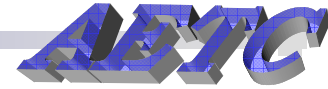
Overview



- Survey background
- Survey results
- Implications



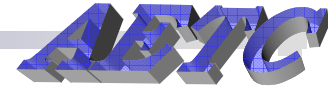
Executive Summary



- Technical tasks are performed throughout all skill levels
- Career ladder documents well supported by survey data
- Job satisfaction indicators are positive



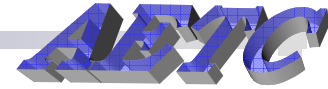
Work Performed



- Controls en route and terminal air traffic by use of visual, radar, and non-radar means
- Supervises and manages air traffic control (ATC) facilities
- Initiates and issues ATC clearances, instructions, and advisories to ensure safe, orderly, and expeditious flow of air traffic operating under instrument and visual flight rules
- Plans, organizes, directs, inspects, and evaluates ATC activities



Current Training Program



- **AFSC-awarding courses: 334 TRS, Keesler, AFB, MS**
 - E3AQR1C13-000, Air Traffic Control Fundamentals Course, 4 weeks
 - 12 semester hours for CCAF
 - Programmed TPR

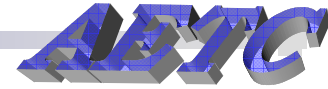
FY04: 430	<u>Programmed Elimination Rate</u>
FY05: 506	FY04: 12%
FY05 (retrainees): 50	FY05: 10%
	N/A for retrainees
 - E3AQR1C13R-000, Air Traffic Control Radar Apprentice Course, 6 weeks, 2 days
 - 12 semester hours for CCAF
 - Programmed TPR

FY04: 215	<u>Programmed Elimination Rate</u>
FY05: 228	FY04: 13%
FY05 (retrainees): 25	FY05: 13%
	N/A for retrainees
 - E3AQR1C13T-000, Air Traffic Control Tower Apprentice Course, 6 weeks, 2 days
 - 12 semester hours for CCAF
 - Programmed TPR

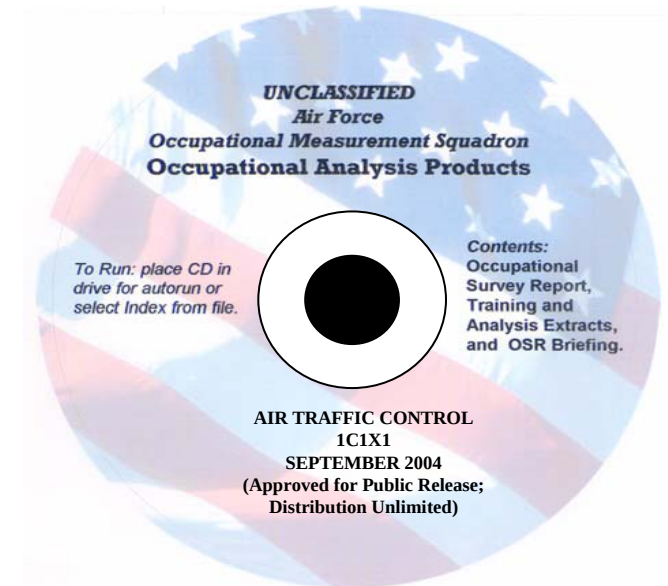
FY04: 215	<u>Programmed Elimination Rate</u>
FY05: 227	FY04: 10%
FY05 (retrainees): 25	FY05: 7%
	N/A for retrainees



Survey Background

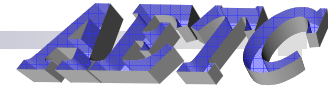


- Last Occupational Survey Report (OSR): February 2001
- Current survey developed: November - February 2004
 - Laughlin AFB TX
 - McGuire AFB NJ
 - Shaw AFB SC
 - Tyndall AFB FL
 - Eglin AFB FL
 - Hurlburt Field FL
 - Patrick AFB FL
 - Keesler AFB MS
 - Nellis AFB NV





Survey Background (Cont.)

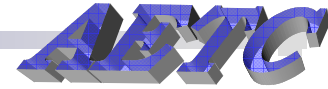


- Survey initiated to obtain data to:
 - Evaluate current classification and training documents
 - Support promotion test development
 - Review technical training separation of radar and tower
- Current survey data collected: April - June 2004
- Components surveyed:
 - Active Duty: 3-, 5-, 7-, and 9-Skill Levels
 - Guard: 3-, 5-, 7-, and 9-Skill Levels





Survey Sample Characteristics



	<u>AD</u>	<u>ANG</u>	<u>Total</u>
Assigned*	3,355	358	3,713
Mailed Out	3,043	290	3,333
Sample	1,733	0	1,733
Usable Returns	57%	0	52%

Average time in career field for AD: 6 years 4 months

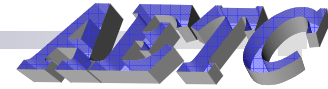
Average TAFMS for AD: 7 years 3 months

Percent of AD in first enlistment: 43%

*Assigned as of Feb 04



Command Representation



					
Command	Assigned %**	Sample %			
	ACC	25	25		
	AETC	23	24		
	AMC	15	20		
	USAFE	9	11		
	PACAF	9	11		
	AFMC	6	7		
	AFSOC	3	2		
	OTHER*	2	1		
	ANG	8	0		

*Other includes: AFSPC, AFFSA, USAFA, AFRES, AFOTE, AFSA, ELM, HQ US, PACOM, USSOC

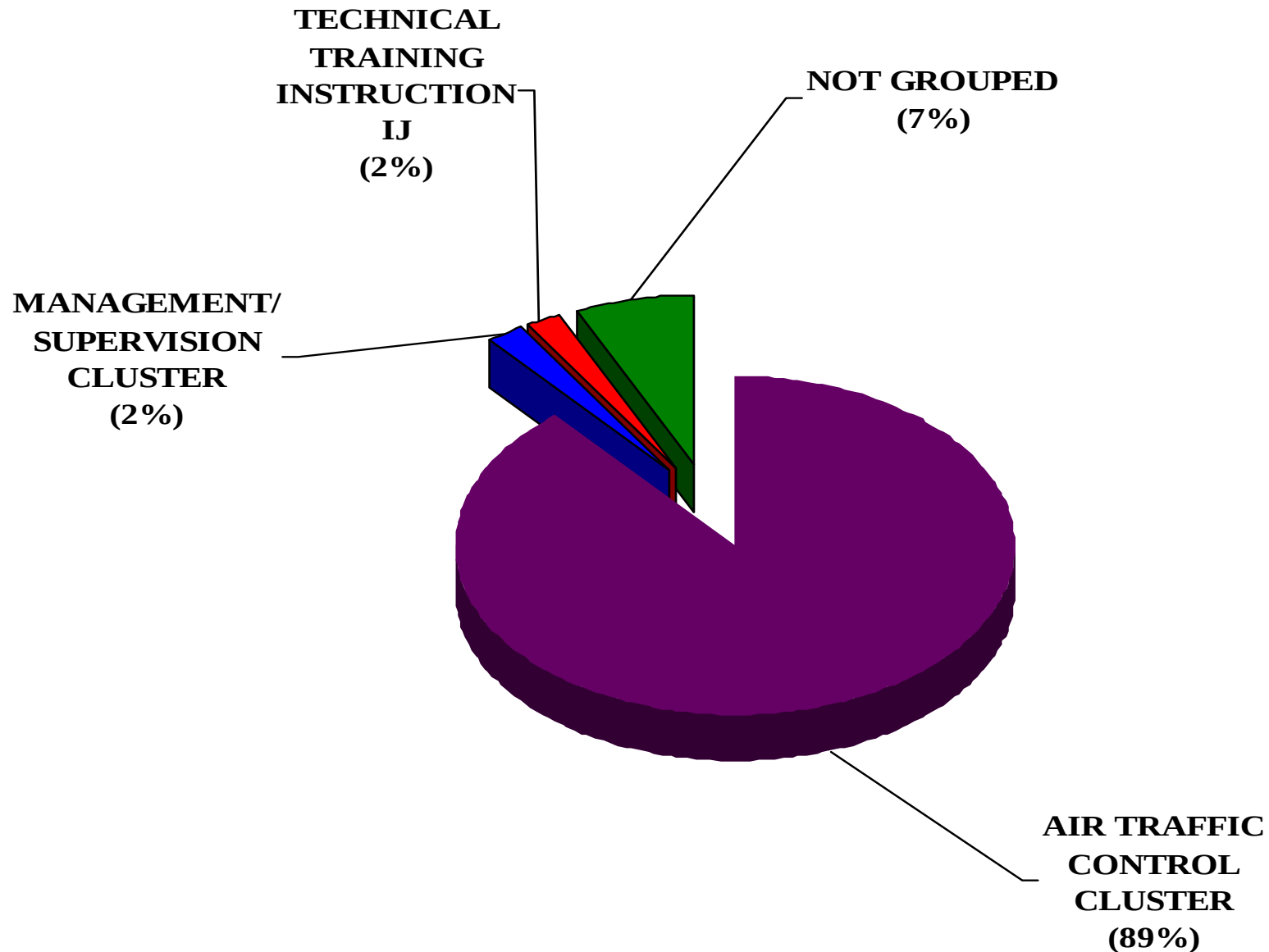
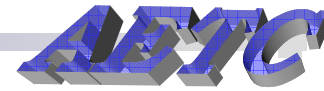
** Assigned as of Feb 04

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



Specialty Clusters and Jobs

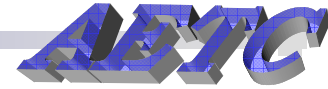
(N=1,733)



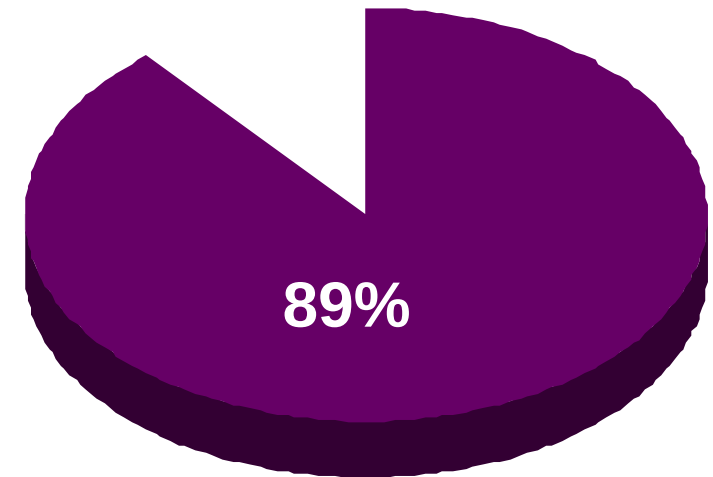


AIR TRAFFIC CONTROL CLUSTER

(N=1,546)



- Apply duty, operational, and local aircraft priorities
- Annotate or update flight progress strips
- Complete preduty equipment checklists
- Perform interfacility coordination
- Issue altimeter settings
- Perform intrafacility coordination
- Transfer control of aircraft
- Transfer position responsibility
- Issue traffic advisories



Tower Apprentice Job

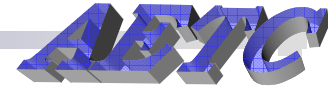
RAPCON Apprentice Job

Tower Job

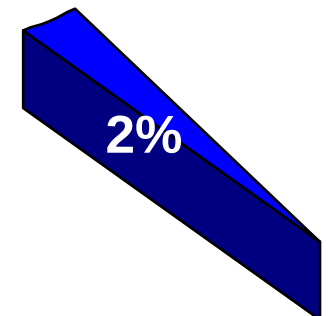
RAPCON Job



Management/Supervision IJ (N=40)

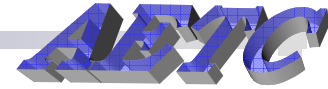


- Write or indorse military performance reports
- Write recommendations for awards or decorations
- Conduct self-inspections or self-assessments
- Counsel subordinates concerning personal matters
- Conduct supervisory performance feedback sessions
- Assign personnel to work areas or duty positions
- Maintain administrative files
- Conduct general meetings, such as staff meetings, briefings, conferences, or workshops
- Inspect personnel for compliance with military standards

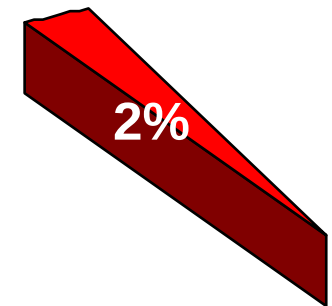




Technical Training Instruction IJ (N=27)

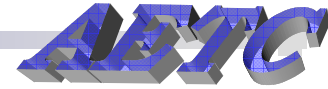


- Counsel trainees on training progress
- Conduct formal course classroom training
- Evaluate progress of trainees
- Administer or score tests
- Brief personnel concerning training programs or matters
- Initiate ATCTD or radar simulator sessions
- Operate pseudopilots for ATC simulators
- Administer computer-based training
- Write training reports
- Maintain training records or files
- Evaluate effectiveness of training programs, plans, or procedures





Percent Across Specialty Clusters and Jobs by DAFSC



<u>SPECIALTY JOBS</u>	DAFSC 1C131 (N=492)	DAFSC 1C151 (N=784)	DAFSC 1C171 (N=412)	DAFSC 1C191 (N=35)	DAFSC 1C100 (N=10)
AIR TRAFFIC CONTROL CLUSTER	93	90	85	69	70
Tower Apprentice Job	5	2	2	0	0
RAPCON Apprentice Job	7	2	2	0	0
Tower Job	40	40	35	40	10
RAPCON Job	34	42	43	29	60
MANAGEMENT/SUPERVISION IJ	0	*	6	17	30
TECHNICAL TRAINING INSTRUCTION IJ	0	3	1	0	0
NOT GROUPED	7	6	8	14	0

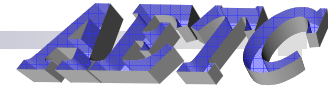
* Indicates less than 1%

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



Career Ladder Progression

Percent Time Spent on Duties



DUTIES	DAFSC	DAFSC	DAFSC
	1C131	1C151	1C171
	(N=492)	(N=784)	(N=412)
A PERFORMING GENERAL AIR TRAFFIC CONTROL ACTIVITIES	68	60	50
B PERFORMING RADAR ACTIVITIES	12	11	9
C PERFORMING CONTROL TOWER ACTIVITIES	16	15	13
D PERFORMING AIR TRAFFIC CONTROL MOBILE OPERATIONS	*	1	1
E PERFORMING GENERAL DEPLOYMENT AND CONTINGENCY OPERATIONS ACTIVITIES	1	1	2
F PERFORMING GENERAL ADMINISTRATIVE ACTIVITIES	1	1	4
G PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	1	1	2
H PERFORMING TRAINING ACTIVITIES	2	8	9
I PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	*	2	11

* Indicates less than 1%

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

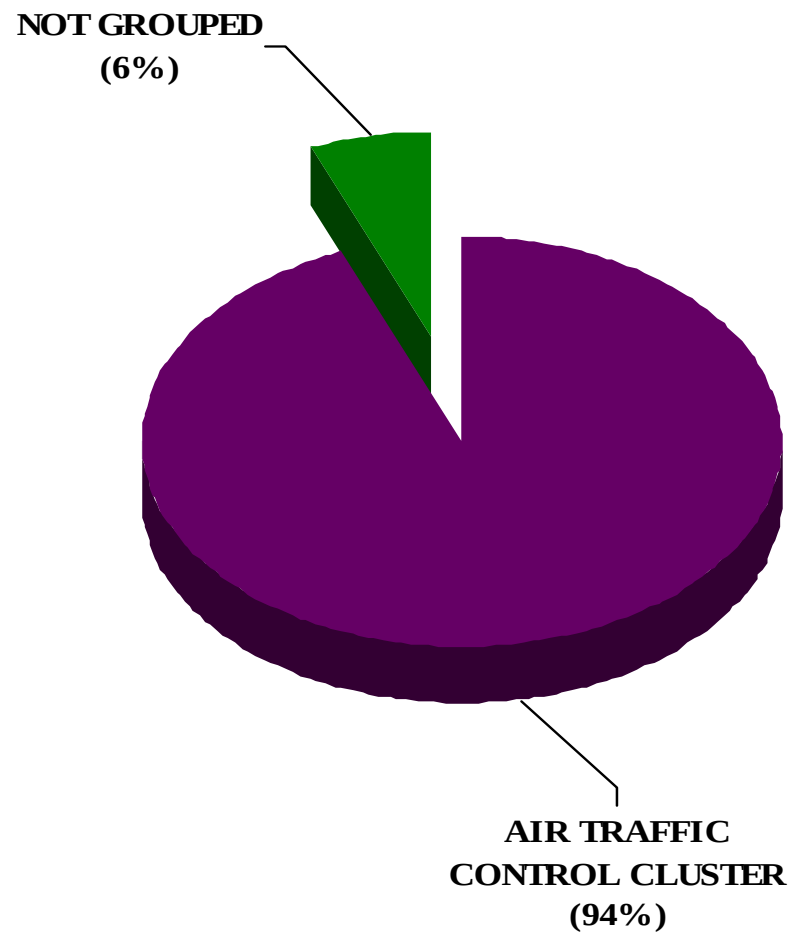


First-Enlistment Cluster

(N=744)

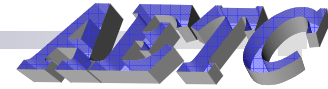


AETC





First-Enlistment Personnel Representative Tasks

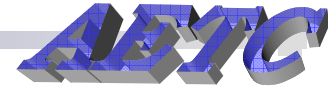


PERCENT
MEMBERS
PERFORMING
(N=744)

TASKS	
Apply duty, operational, and local aircraft priorities	92
Annotate or update flight progress strips	91
Clean work areas or equipment	91
Complete preduty equipment checklists	91
Apply visual separations procedures	90
Perform interfacility coordination	87
Perform intrafacility coordination	87
Issue altimeter settings	87
Apply wake turbulence separations	86
Transfer control of aircraft	86
Transfer position responsibility	86
Assign frequencies to aircraft	85
Transfer communications of aircraft	85
Sequence aircraft	85
Issue traffic advisories	85
Copy, issue, or relay PIREP in-flight weather conditions	85
Issue bird advisories	85



First-Enlistment Personnel Equipment or Tools



PERCENT
MEMBERS
PERFORMING
(N=744)

EQUIPMENT OR TOOLS

Control Tower Equipment

Facility Clocks	65
Ultrahigh Frequency (UHF) Radios, AN/GRC-171	63
Wind Indicators, ANG/FMG-13	61
Wind Indicators, AN/FMQ-13	60
Digital Voice Recording Systems (DVRSSs)	58
VHF Radios, VHF AN/GRC-211	56
Automatic Terminal Information Services (ATISs)	56

Radar Equipment

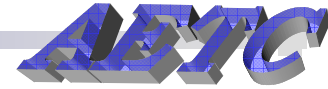
Facility Clocks (Radar)	69
UHF Radios, AN/GRC-171	62
VHF Radios, AN/GRC-211	57
DVRSSs	54
ETVSSs	53

Navigational Aid (NAVAID)

Instrument Landing Systems (ILSs)	79
Tactical Air Navigation (TACAN) Systems	76



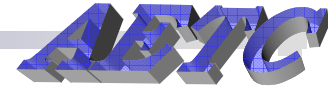
Specialty Training Standard (STS) Analysis



- STS is well supported by survey data
 - Fundamentals: 9 of 273 STS items unsupported
 - Tower: 1 of 82 STS items unsupported
 - Radar: 0 of 110 STS item unsupported
- Some STS items may need proficiency code review: uncoded STS items matched to JI tasks performed by more than 20% of members
 - Fundamentals: 9
 - Tower: 117
 - Radar: 125
- Some technical tasks performed by 20% or more of members were not referenced to STS and should be reviewed for possible inclusion in STS
 - Fundamentals: 9
 - Tower: 117
 - Radar: 124



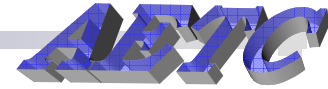
Specialty Training Standard (STS) Analysis



- STS is well supported by survey data
- Some STS items may need proficiency code review: uncoded STS items matched to JI tasks performed by more than 20% of members
 - 5 items were unsupported
- Some technical tasks performed by 20% or more of members were not referenced to STS and should be reviewed for possible inclusion in STS
 - 29 items were not referenced to the STS
 - Majority concentrated in Duty A (Performing General Air Traffic Control Activities)



Unsupported STS Elements (Fundamentals Course)



Examples

UNIT	STS ELEMENT	PROF CODE (A)	PROF CODE (T)	PROF CODE (R)	PERCENT MEMBERS PERFORMING		TNG EMP*	TSK DIF**	ATI**
					1ST ENL (N=744)	3- LVL (N=492)			
3.2. Task	Class B Airspace (3. Operational Areas) A0034. Control aircraft operations in Class B Airspace	B			15	18	3.68	4.83	7
8.11. Task	Timed Approaches (8. Non-Radar Procedures) B0162. Control timed approaches	A			19	17	2.86	6.24	2

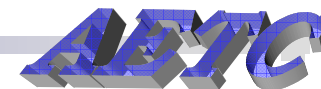
* Mean TE Rating = 3.14; Standard Deviation = 1.69; High TE = 4.83

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

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



Proficiency Codes Requiring Review



		PERCENT MEMBERS PERFORMING						
UNIT	STS ELEMENT	PROF CODE	FUND (N=1,531)	TOWER (N=1,100)	RADAR (N=1,062)	TNG EMP*	TSK DIF**	ATI***
7.10	Facility Evacuation Procedures (7. Operating Procedures)	-						
Task	A0109. Perform facility evacuation procedures		61	62	62	3.58	4.22	17
7.52	Aircraft Conducting Unusual Maneuvers (7. Operating Procedures)	-						
Task	A0010. Approve or disapprove pilot requests to conduct unusual maneuvers		65	64	67	3.47	4.76	17
7.127	Altitude Reservations (7. Operating Procedures)	-						
Tasks	A0047. Coordinate altitude reservation conflicts with appropriate personnel		38	32	43	2.89	4.65	14
	A0128. Relay airspace reservation amendment delays or cancellations		40	37	43	2.69	4.06	14
	A0131. Relay enroute altitude reservations		33	30	38	2.90	4.03	14

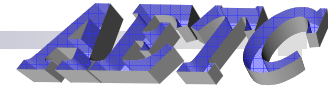
*Mean TE Rating is 3.14, Standard Deviation is 1.69 (HIGH TE=4.83)

**Mean TD Rating is 5.00, Standard Deviation is 1.00 (HIGH TD= 6.00)

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



Tasks not Referenced to STS



Examples

TASK		PERCENT MEMBERS PERFORMING		TNG EMP*	TSK DIF**	ATI***
		1 ST ENL (N=744)	3-LVL (N=492)			
A0005.	Apply duty, operational, and local aircraft priorities	90	92	6.26	4.70	18
A0025.	Conduct communications-out procedures	48	41	4.31	5.00	15
A0038.	Control emergency aircraft to alternate fuel aircraft	40	34	3.62	5.48	15
A0041.	Control minimum fuel or emergency fuel aircraft	77	70	5.38	5.19	18
A0117.	Perform tape transcriptions	54	49	3.20	5.47	17
A0143.	Track or flight-follow unmanned, suspect, or derelict airborne objects	30	28	2.99	4.86	14
B0161.	Control no-gyro aircraft	39	34	4.45	6.60	15
C0213	Control emergency or minimum fuel operations	51	47	5.12	5.58	18
C0238	Protect overhead travel patterns	52	49	5.11	5.38	18

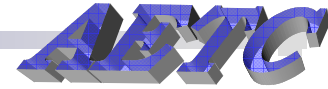
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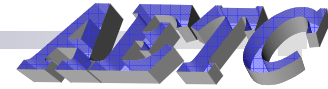
Job Satisfaction Indicators



	AD <u>(N=1,733)</u>
JOB INTERESTING	87
TALENTS WELL UTILIZED	91
TRAINING WELL UTILIZED	94
SENSE OF ACCOMPLISHMENT	81



Job Satisfaction Indicators (Current vs. Previous Study)

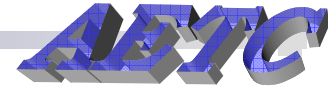


	First-Term Airmen (1-48 MONTHS)		Second-Term Airmen (49-96 MONTHS)		Career Airmen 97+ MONTHS	
	2004 (N=744)	2001 (N=796)	2004 (N=481)	2001 (N=126)	2004 (N=508)	2001 (N=813)
JOB INTERESTING	89	94	87	96	83	94
TALENTS WELL UTILIZED	93	94	93	96	88	89
TRAINING WELL UTILIZED	98	97	95	95	89	92
SENSE OF ACCOMPLISHMENT	92	90	90	90	87	75
PLAN TO REENLIST	34	40	37	35	48	42



Retention Dimensions

First-Term Airmen (N=744)



PLANNING TO REENLIST (N=252)	PERCENT	
	RESPONDING	AVERAGE
Bonus or special pay	71	2.66
Pay and allowances	64	2.40
Medical or dental care for AD member	56	2.59
Job security	54	2.59
Military-related education/training opportunities	52	2.36

PLANNING TO SEPARATE (N=488)

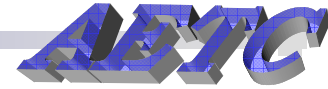
Pay and allowances	63	2.53
Military lifestyle	61	2.42
Civilian job opportunities	57	2.74
Bonus or special pay	34	2.53
Work schedule	30	2.34

Scale: 1 = slight influence, 2 = moderate influence, 3 = strong influence



Retention Dimensions

Second-Term Airmen (N=481)



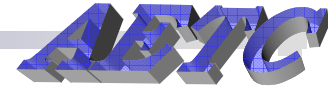
PLANNING TO REENLIST (N=178)	PERCENT	AVERAGE
	RESPONDING	
Bonus or special pay	85	2.65
Pay and allowances	66	2.44
Job security	60	2.49
Retirement benefits	57	2.66
Medical or dental care for AD member	56	2.47
PLANNING TO SEPARATE (N=302)		
Pay and allowances	67	2.56
Civilian job opportunities	66	2.72
Military lifestyle	56	2.31
Work schedule	34	2.33
Additional duties	34	2.13

Scale: 1 = slight influence, 2 = moderate influence, 3 = strong influence



Retention Dimensions

Career Airmen (N=508)

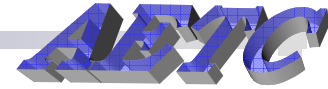


PLANNING TO REENLIST (N=245)	PERCENT RESPONDING	AVERAGE
Retirement benefits	74	2.63
Bonus or special pay	52	2.47
Pay and allowances	47	2.48
Job security	46	2.54
Military lifestyle	43	2.36
PLANNING TO SEPARATE (N=84)		
Pay and allowances	58	2.61
Civilian job opportunities	57	2.62
Bonus or special pay	50	2.55
Military lifestyle	37	2.23
Additional duties	35	2.66

Scale: 1 = slight influence, 2 = moderate influence, 3 = strong influence



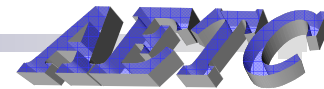
Summary of Results



- Career ladder progression typical
 - Technical at 3-skill level progressing to more managerial at 9-skill level and beyond
- Career ladder documents well supported by survey data
 - STS provided comprehensive coverage of work performed by career ladder
 - Review of some items warranted
- Job satisfaction indicators
 - Similar when compared to previous study across all TAFMS groups



Way Ahead



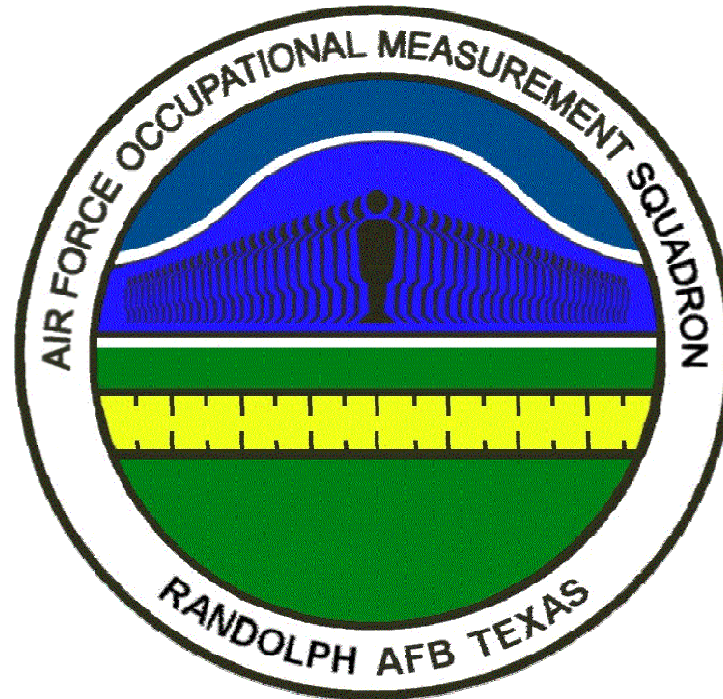
- U&TW held 2-6 Aug 04
- Next SKT rewrite (major) - scheduled for Apr 05



Questions?



AETC



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E-Mail: kimberly.mccoy@randolph.af.mil

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