

Air Education and Training Command

Sustaining the Combat Capability of America's Air Force



Occupational Survey Report AFSC 1N6X1 Electronic System Security Assessment

U.S. AIR FORCE

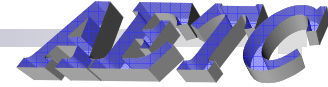
Lt Mary Hrynyk
20 Dec 04

Integrity - Service - Excellence

Report Documentation Page				Form Approved OMB No. 0704-0188	
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1. REPORT DATE 00 JAN 2005		2. REPORT TYPE N/A		3. DATES COVERED -	
4. TITLE AND SUBTITLE Occupational Survey Report AFSC 1N6X1 Electronic System Security Assessment				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Air Force Occupational Measurement Squadron Randolph AFB, TX				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release, distribution unlimited					
13. SUPPLEMENTARY NOTES See also ADM001759 Occupational Analysis Products: Electronic System Security Assessment- AFSC 1N6X1., The original document contains color images.					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT UU	18. NUMBER OF PAGES 35	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			



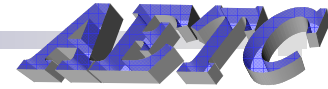
Overview



- Survey background
- Survey results
- Implications and way ahead



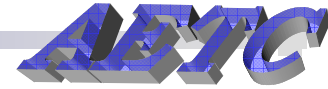
Executive Summary



- Heterogeneous job structure with one cluster and seven independent jobs identified
- Technical tasks are performed throughout all skill levels
- Career ladder documents supported by survey data
- Job satisfaction indicators are good



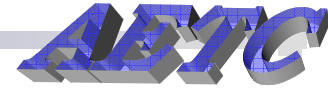
Work Performed



- Emulates the role of a hostile intelligence service (HOIS) by collecting, analyzing, and processing DoD telecommunications, such as: telephone, computer-to-computer, facsimile, radio, and wireless transmissions
- Applies analytical processes to determine critical information potentially compromised and exploited by HOIS threats
- Identifies adverse operations security (OPSEC) trends and monitors friendly telecommunications during peacetime operations



Current Training Program



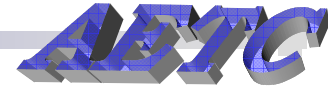
- AFSC-awarding course
 - 316 TRS, Goodfellow AFB TX
 - X3ABR1N631-005, Electronic System Security Assessment Apprenticeship Course, 40 days
 - 15 Semester hours for CCAF
 - Programmed TPR

FY04: 163 students	FY04: 2%
FY05: 135 students	FY05: 2%

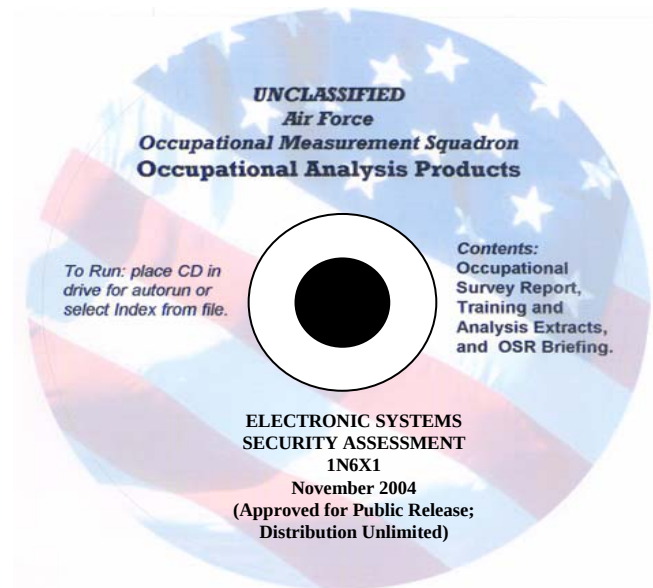
Programmed Elimination Rate



Survey Background

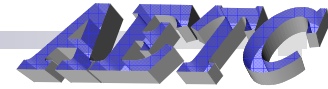


- Current survey developed – November 2003 - January 2004
 - Goodfellow AFB TX (Tech School) (3)
 - Brooks AFB TX (5)
 - Lackland AFB TX (6)
 - Hickam AFB HI (4)
 - Camp Smith HI (2)
 - Scott AFB IL (4)





Survey Background

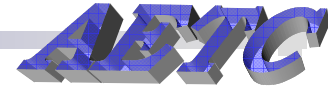


- Survey initiated to obtain data to:
 - Evaluate current classification and training documents
 - Support promotion test development
- Current survey data collected - June - September 2004
- Components surveyed:
 - Active Duty: 3-, 5-, 7- and 9-Skill Levels
 - Reserve: 3-, 5-, 7- and 9-Skill Levels





Survey Sample Characteristics



	<u>AD</u>	<u>AFRC</u>	<u>Total</u>
Assigned*	346	57	403
Mailed Out	240	44	284
Sample	172	12	184
Usable Returns	72%	27%	65%

- Average time in career field for AD: 5 yrs 9 mos
- Average TAFMS for AD: 6 yrs 9 mos
- Percent of AD in first enlistment: 51%

* Assigned as of Nov 04



Paygrade Characteristics



AETC



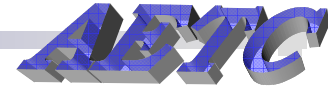
Paygrade Distribution

		Assigned*	Sample	
	E-1 - E-2	- 12%	4%	
	E-3	- 28%	28%	
	E-4	- 18%	21%	
	E-5	- 20%	23%	
	E-6	- 12%	14%	
	E-7	- 7%	7%	
	E-8	- 3%	3%	

* Assigned as of Nov 04

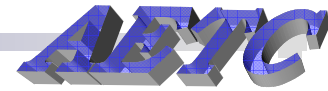


Command Representation



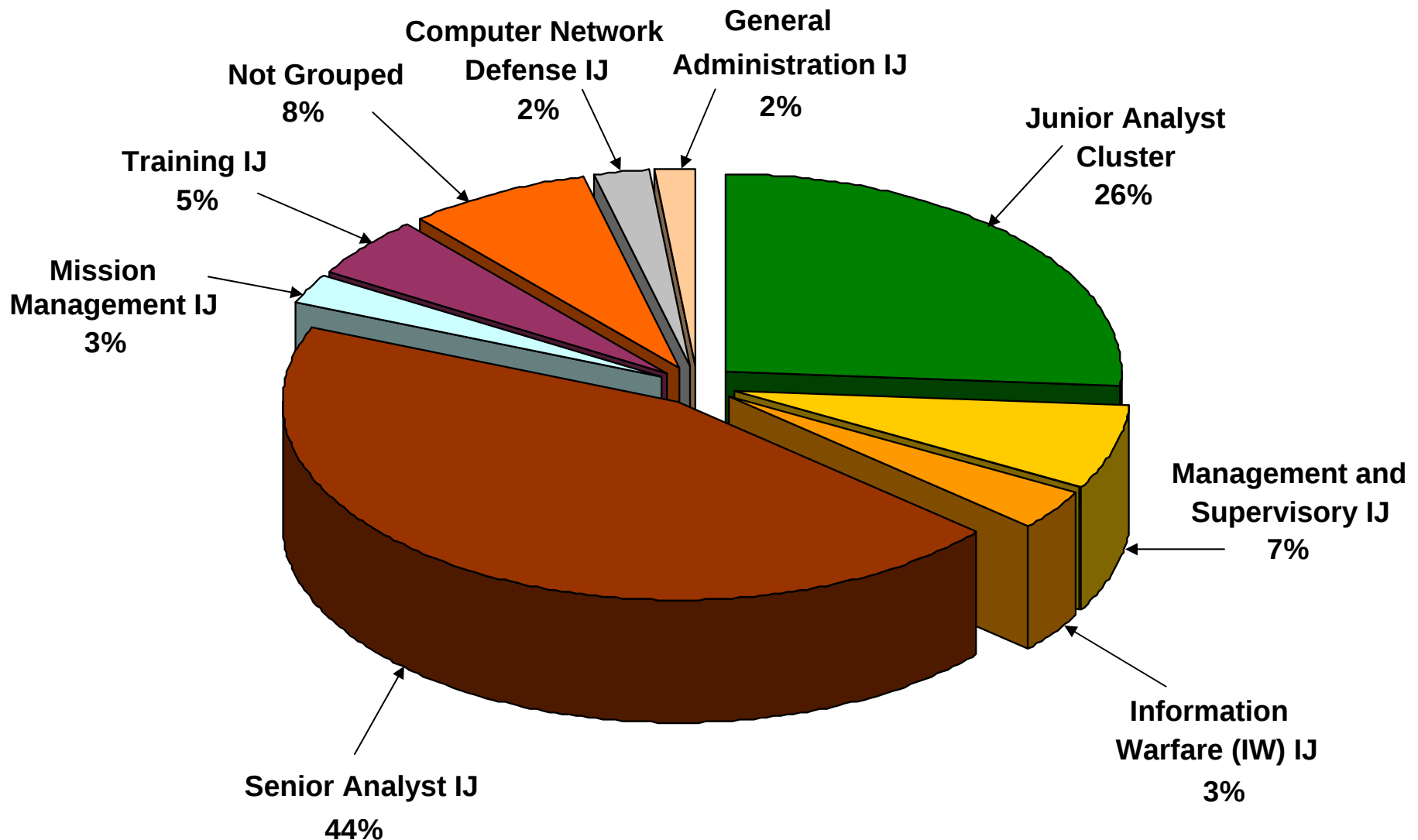
Command	Assigned %**	Sample %
AETC	3	3
AIA	83	90
AFRC	14	7

** Assigned as of Nov 04



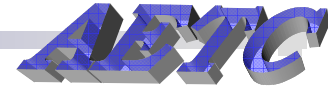
Job Structure

Sample Size: 184





Junior Analyst Cluster (N=48)



- Analyze telephone communications
- Analyze electronic mail (e-mail) communications
- Identify personal privacy information (PPI)
- Research open source information
- Perform data transfers
- Identify intelligence threats and vulnerabilities
- Identify OPSEC vulnerabilities
- Destroy classified materials
- Create or develop sanitized transcripts
- Conduct on-the-job training (OJT)

Monitoring Analyst Job

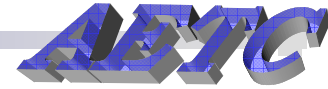
OPSEC Analyst Job

Supply and Equipment Technician Job

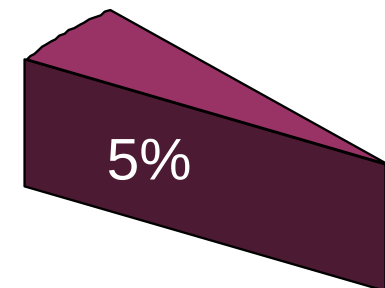
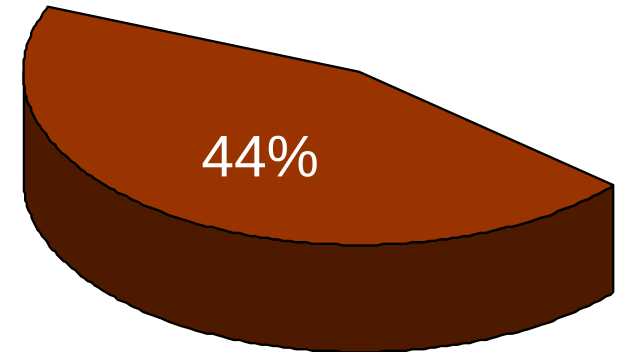
26%



Independent Jobs

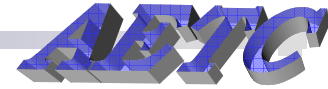


- Senior Analyst IJ (N=82)
 - Analyze e-mail communications
 - Analyze telephone communications
 - Research open source information
 - Identify personal privacy information (PPI)
- Training IJ (N=9)
 - Evaluate progress of Trainees
 - Brief personnel concerning training programs or matters
 - Counsel trainees on training progress
 - Develop or procure training materials or aids

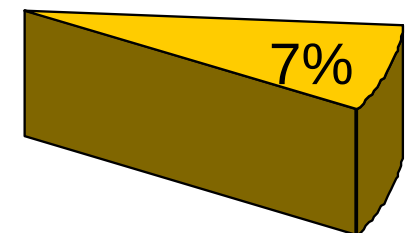
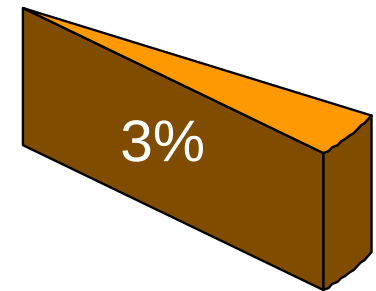




Independent Jobs

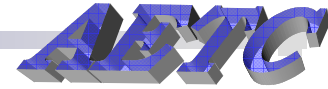


- Information Warfare (IW) IJ (N=6)
 - Identify counterintelligence potentials for integration into information warfare (IW) plans
 - Brief customers on Electronic Systems Security Assessment (ESSA) disclosures
 - Recommend countermeasures to customers
- Management and Supervisory IJ (N=13)
 - Evaluate personnel for compliance with performance standards
 - Determine or establish work assignments or priorities
 - Establish performance standards for subordinates

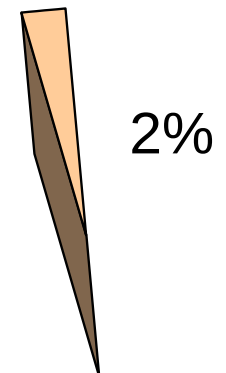
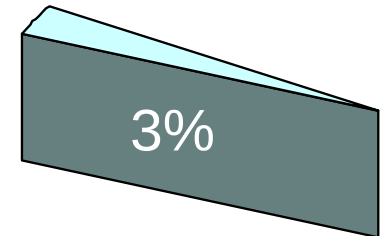




Independent Jobs

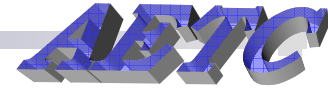


- Mission Management IJ (N=5)
 - Schedule mission timeframes
 - Store classified materials
 - Coordinate monitoring requirements with consumers
- General Administration IJ (N=3)
 - Develop or maintain continuity books
 - Initiate requests for temporary duty (TDY) orders
 - Maintain administrative files
 - Maintain or update status indicators, such as boards, graphs, or charts

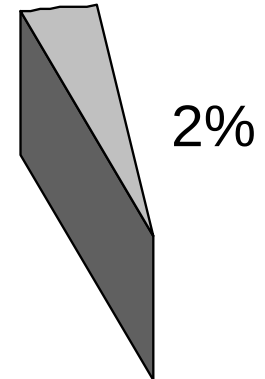




Independent Jobs

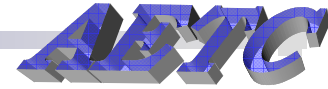


- Computer Network Defense IJ (N=4)
 - Analyze real-time computer events
 - Analyze computer network traffic using Ethereal
 - Research vulnerabilities, exploits, hacking tools, malicious logic, computer configurations, patches, or service packs
 - Analyze exploit codes





Career Ladder Progression

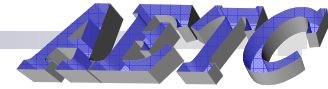


- 3- and 5-skill-level personnel
 - Work in the most technical jobs in the career field
 - Spend most of their time on technical tasks
- 7- and 9-skill-level personnel
 - Continue to perform technical tasks
 - However, take on supervisory, training, and administrative duties



Percent Across Specialty Jobs

DAFSC



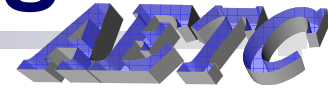
DUTY AREAS	DAFSC 1N631 (N=53)	DAFSC 1N651 (N=88)	DAFSC 1N671 (N=38)	DAFSC 1N691 (N=5)
Junior Analyst Cluster	58	19	0	0
Senior Analyst IJ	28	56	45	20
Training IJ	4	7	3	0
Information Warfare (IW) IJ	2	0	13	0
Management and Supervisory IJ	0	2	21	60
Mission Management IJ	0	3	5	0
General Administration IJ	1	2	0	0
Computer Network Defense IJ	0	3	3	0
Not Grouped	6	8	10	20

* Indicates less than 1%



Career Ladder Progression

Percent Time Spent on Duties



DUTY AREAS	DAFSC 1N631 (N=53)	DAFSC 1N651 (N=88)	DAFSC 1N671 (N=38)	DAFSC 1N691 (N=5)
Performing General Electronic System Security Assessment (ESSA) Activities	11	13	9	4
Performing Telecommunications Monitoring and Assessment Program (TMAP) Activities	45	27	12	8
Performing Friendly Communications Analysis Activities	12	8	6	2
Performing Operations Reporting Activities	7	13	8	3
Performing Computer Network Defense Activities	2	4	3	1
Performing Information Warfare (IW) Activities	7	5	11	17
Performing General Administrative Activities	5	6	7	9
Performing General Supply and Equipment Activities	2	3	2	1
Performing Training Activities	8	10	11	8
Performing Management and Supervisory Activities	1	11	31	47

* Indicates less than 1%

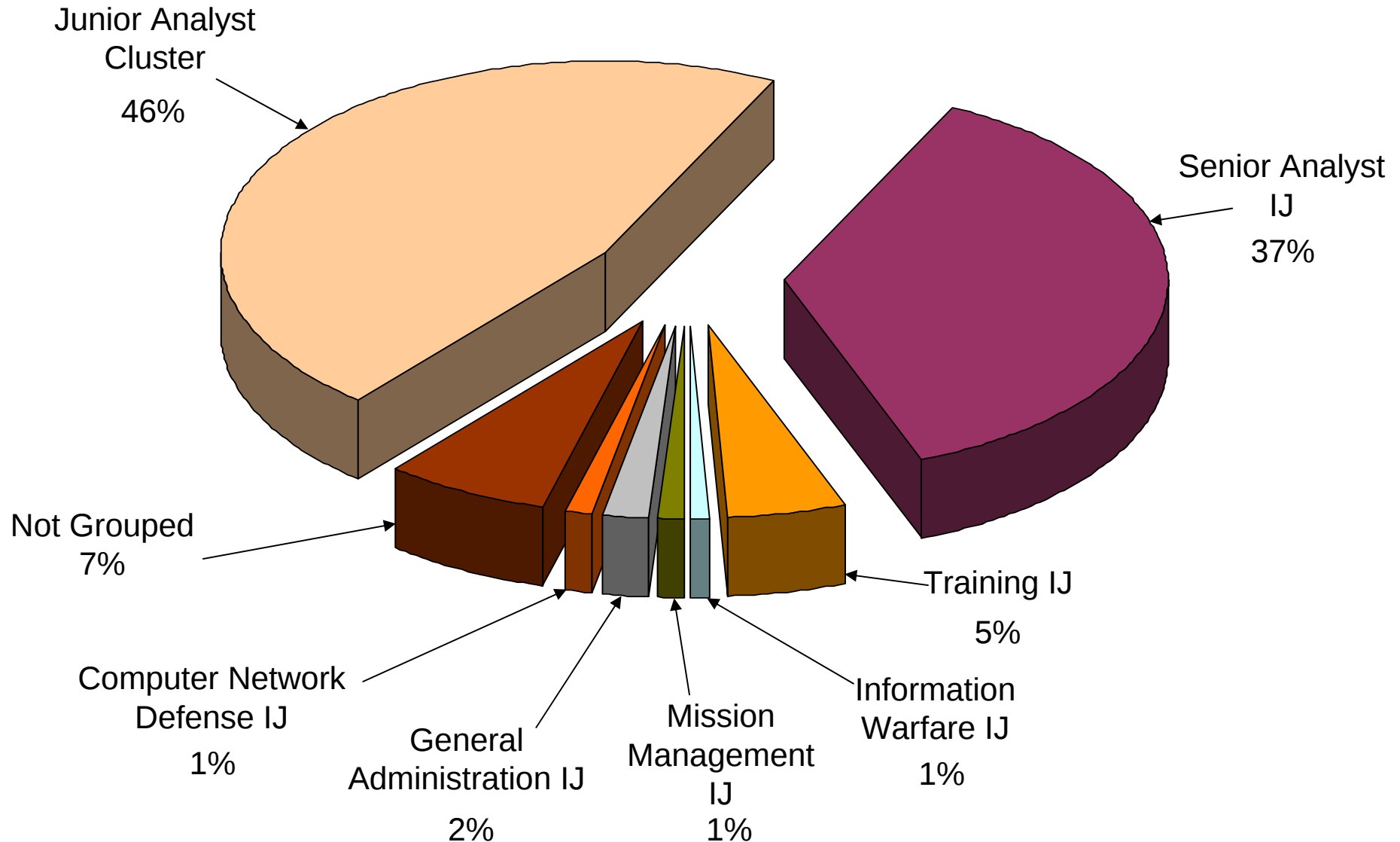


First-Enlistment Job Structure



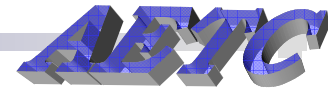
AETC

Sample size: 86





First-Enlistment Personnel Representative Tasks



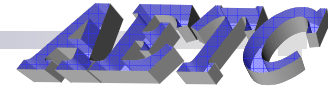
Percent
Members
Performing
(N=86)

Tasks

Analyze telephone communications	91
Analyze electronic mail (e-mail) communications	90
Research open source information	80
Identify personal privacy information (PPI)	78
Create or develop sanitized transcripts	70
Perform data transfers	66
Identify intelligence threats and vulnerabilities	65
Identify OPSEC vulnerabilities	64
Destroy classified materials	62
Create or develop unsanitized transcripts	60
Perform time conversions	57
Set up or tear down telephone monitoring equipment	55
Apply classification markings to classified materials	55
Correlate critical information	53
Create or develop summaries of collected communications	52



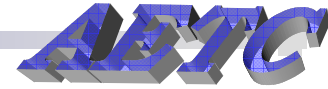
First-Enlistment Personnel Tools & Equipment



Equipment	Percent Members Performing (N=86)
Headphones	86
Sensor Snare Systems	73
Collection Units	70
Personal Computers (PCs)	70
Sensor Empire Systems	66
Archival Units	52
Processing Units	50
Maps	33
Removable Map Drives	31
UNIX Systems	30



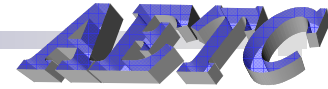
Specialty Training Standard (STS) Analysis



- STS is generally supported by survey data
 - Seven STS items were unsupported
- Some STS items may need proficiency code review
 - Seven uncoded STS items matched to JI tasks performed by more than 20 percent of members
- Many technical tasks performed by 20 percent or more of members were not referenced to STS
 - These should be reviewed for possible inclusion in STS



Unsupported STS Elements



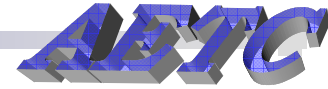
Examples

Unit	Learning Objective	Prof Code	Percent Members Performing		Tng Emp	Tsk Dif	ATI
			1st Job	1st Enl			
5.1.1. Task	Use UNIX/UNIX variants E0084. Perform UNIX and Windows systems administration procedures	2b	3	7	.88	6.39	2
5.2.2 Task	Use operational databases E0086. Query databases and extract information to meet mission requirements	2b	3	3	1.67	6.08	2
10.6.3 Task	Identify information meeting fraud, waste, and abuse (FWA) reporting guidelines B0027. Process fraud, waste, and abuse (FWA) reports	2b	13	14	2.33	4.87	7

Mean TE Rating is 1.80, Standard Deviation is 2.07 (HIGH TE= 3.87)
Mean TD Rating is 5.00, Standard Deviation is 1.00 (HIGH TD= 6.00)



Proficiency Codes Requiring Review

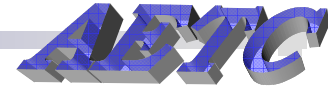


Unit	Learning Objective	Prof Code	Percent Members Performing		Tng Emp	Tsk Dif	ATI
			1st Job	1st Enl			
1.3	Classified destruction	A					
Task	A0002. Destroy classified materials		47	62	4.50	2.05	13
11.2	Intelligence threat and vulnerability to C4 systems	A					
Task	C0039. Identify intelligence threats and vulnerabilities		66	65	4.25	5.59	18
8.6.5.2	Operations Security (OPSEC)	B					
Task	F101. Identify OPSEC indicators		34	51	5.79	4.61	18

Mean TE Rating is 1.80, Standard Deviation is 2.07 (HIGH TE= 3.87)
Mean TD Rating is 5.00, Standard Deviation is 1.00 (HIGH TD= 6.00)



Tasks not Referenced to STS



Examples

Tasks	Percent Members Performing		Tng Emp	Tsk Dif	ATI
	1 st Job	1 st Enl			
B0010 Acquire targeted CI lists	42	50	4.04	4.17	18
B0019 Create or develop sanitized transcripts	66	70	7.08	4.07	18
B0021 Create or develop unsanitized transcripts	50	60	7.08	4.05	18
B0035 Set up or tear down e-mail monitoring equipment	29	51	6.88	4.64	18

Mean TE Rating is 1.80, Standard Deviation is 2.07 (HIGH TE= 3.87)
Mean TD Rating is 5.00, Standard Deviation is 1.00 (HIGH TD= 6.00)



Job Satisfaction Indicators (AD) (Across Specialty Jobs)



AETC

	Junior Analyst Cluster (N=48)	Senior Analyst IJ (N=82)	Training IJ (N=9)	Information Warfare IJ (N=6)
Job interesting	46	80	100	83
Talents well utilized	50	80	100	83
Training well utilized	75	89	33	67
Sense of accomplishment	60	73	100	83
Plan to reenlist	68	94	0	83



Job Satisfaction Indicators (AD) (Across Specialty Jobs cont.)



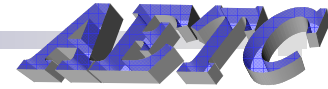
AETC

	Mgt/Supy IJ (N=13)	Mission Mangement IJ (N=5)	General Admin IJ (N=3)	Computer Network Defense IJ (N=4)
Job interesting	92	60	66	100
Talents well utilized	92	100	67	100
Training well utilized	85	60	100	100
Sense of accomplishment	100	40	67	100
Plan to reenlist	46	40	67	75



Retention Dimensions

First-Term Airmen (N=86)



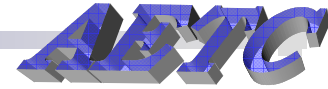
	Percent Responding	Average
Planning to Reenlist (N=59)		
Military lifestyle	80	2.47
Pay and allowances	75	2.39
Job security	71	2.55
Medical or dental care for AD members	66	2.54
Military-related education/training opportunities	66	2.26
Planning to Separate (N=24)		
Military lifestyle	46	2.55
Civilian job opportunities	37	1.89
Esprit de corps/morale	29	2.43
Work schedule	29	2.14
Location of present assignment	29	2.00

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



Retention Dimensions

Second-Term Airmen (N=35)



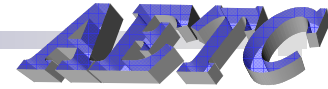
	Percent Responding	Average
Planning to Reenlist (N=22)		
Retirement benefits	82	2.67
Job security	82	2.33
Pay and allowances	73	2.56
Medical or dental care for AD members	73	2.50
Bonus or special pay	68	2.33
Planning to Separate (N=13)		
Military lifestyle	77	2.20
Location of present assignment	46	2.33
Recognition of efforts	38	2.00
Pay and allowances	38	1.60
Civilian job opportunities	31	2.75

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



Retention Dimensions

Career Airmen (N=51)

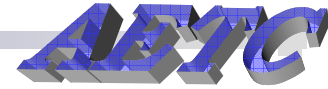


	Percent Responding	Average
Planning to Reenlist (N=34)		
Job security	71	2.29
Retirement benefits	68	2.83
Medical or dental care for family members	65	2.41
Military lifestyle	59	2.45
Medical or dental care for AD members	59	2.35
Planning to Separate (N=5)		
Civilian job opportunities	80	2.75
Pay and allowances	60	2.33
Leadership at unit level	40	3.00
Esprit de corps/morale	40	2.50
Recognition of efforts	40	2.50

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



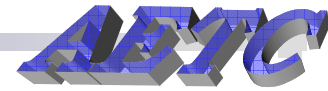
Summary of Results



- Career ladder progression typical
 - Highly technical at 3-skill level progressing to more managerial at 7-skill level and beyond
- Career ladder documents supported by survey data
 - STS provides comprehensive coverage of work performed by career ladder
 - Review of some items warranted
- Job satisfaction indicators
 - Lower expressed job interest for Junior Analyst Cluster

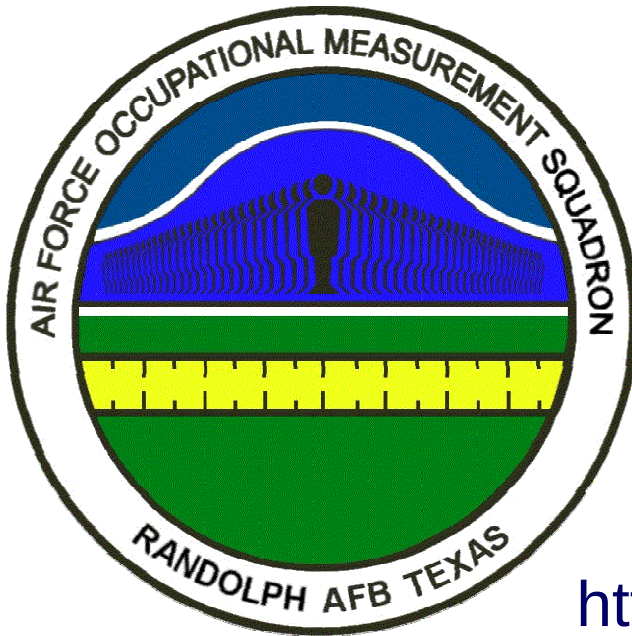


Way Ahead



- OSR Delivery Trip – Jan 05
- Utilization and Training Workshop (U&TW) – TBD
 - Scheduled at AIA
- Next SKT rewrite (Ext Minor) - scheduled for Aug 05

Questions?



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