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**TITLE:**

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**Subject:** FY '60 Budget

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**From:** J. F. Jacobs

*J.F. Jacobs*

BY: *Eileen G. Blake*

**Date:** 13 February 1959

**Supersedes:**

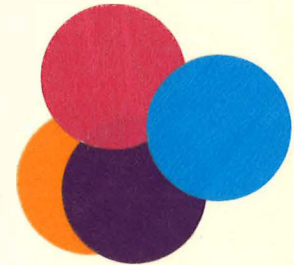
Attached working papers are submitted in support of the preparation of the FY '60 Budget based on task descriptions submitted to The MITRE Corporation by letter of 10 February 1959 from Lt. Col. R. W. Flanagan to Mr. C. W. Halligan

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<u>BUDGET (FY '60)</u>	<u>\$M</u>
Normal Operating Expense	
889 Staff at \$30K	26.6
Extraordinary Expense	
Line Accounts	
Other Extraordinary	3.1
Support Accounts	
SSC Building	2.5
709 and Card Machine Rental	2.2
ESS	1.7
Data Processing	1.0
Radar and IR	1.8
Communications	.2
	12.5
Electronic Stock, Shop & Service Equip- ment, Office Supplies, Furniture, etc.	1.7
MITRE Bldg. Rental and Maintenance	<u>.9</u>
	41.7
Management Fee at 10%	<u>4.2</u>
	45.9

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<u>Task</u>	<u>Estimate</u>	<u>Staff</u>
-1-		
Integration Specification Preparation		
1. Initial SAGE II Computer Program	Dept. 11	4
2. SACCS and the Air Defense Mission System	Dept. 16	2
3. 1965 Computer Program for Improved SAGE II	Dept. 11	1
4. Air Traffic Control Computer Program	Dept. 16	4
5. Mark XII SIF Computer Program	Dept. 11	3
6. NORAD COC Computer Program	Dept. 17	4
7. BOMARC B Missile Computer Program	Dept. 11	15
8. F-108 Computer Program	Dept. 11	11
9. AEW&C Computer Program	Dept. 11	3
10. Missile Master/ATABLE Computer Program	Dept. 11	5
11. Incorporation of ECCM and Strobe Analysis Features in SAGE Computer Program	Dept. 11	9
12. Changes and Revisions to SAGE Computer Program Specs.	Dept. 11	20
Integration of New Weapons Systems	Dept. 11)	7
Analysis of Operational Employment Plans for Air Defense Weapons Systems	Dept. 11)	
Air/Ground and Point-to-Point Data Transmission	Dept. 11	7
Hardening of the Air Defense Mission System	Dept. 17	10
Airborne Early Warning and Control Integration	Dept. 11	4
Integration of Air Defense/Air Traffic Control	Dept. 16	10
Integration of New Techniques in Identification	Dept. 11	Covered
Vulnerability of Electronic Systems to ECM	Dept. 14	10
Integration of the Ballistic Missile Feature into the Programmed Early Warning System	Dept. 17	2
Air Defense Mission System Improvement Program	Dept. 14	5
Integration of Army and Navy Forces into the Continental Air Defense System	Dept. 11	2
Integration of ANG and AFR into the Air Defense Mission System	Dept. 11	1
System Compatibility	Depts. 11,17,18	29
IM-99 (BOMARC)		
IM-99B/SAGE Integration Planning	Dept. 18)	8
SAGE/BOMARC Technical Compatibility	Dept. 14)	
IM-99A/IM-99B Joint Use	Dept. 11)	

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<u>Task</u>	<u>Estimate</u>	<u>Staff</u>
WS-202A (F-108)		
WS-202A (F-108) Communication Plan	Dept. 11	1
WS-202A (F-108) Integration Plan	Dept. 18	6
WS-202A (F-108) Integration Test Program	Dept. 14	2
 New Systems		
Investigate System 117L for Possible Areas of Integration with ADMS	Dept. 17	1
Determine Requirements, Feasibility, Methods for Integration of New Systems with the ADMS	Depts. 16,17	10
 Integration of 224A (BMEWS) with ADMS	Dept. 18	6
Airborne Long Range Input (ALRI)	Dept. 12	14
IM-X/SAGE Integration	Dept. 11	3
 System 216L		
Data Acquisition	Dept. 12	25
Data Processing	Dept. 12	6
"Hardening" Communications Subsystem	Dept. 17	4
 Communications	Dept. 11	31
Identification	Dept. 11	4
 Airborne Early Warning & Control		
AEW&C Integration Plan	Dept. 18	4
AEW&C Communications Plan	Dept. 12	2
 NIKE		
Integration of NIKE Weapons with SAGE Battery Routing Equip.	Dept. 18	2
Implementation of NORAD Control Centers using Missile Masters	Dept. 11	1
Integration of NIKE Defenses into the ADMS	Dept. 11	4
 Investigation of Effects of Nuclear Blasts on the ADMS	Dept. 11	1
Integration of DEW Line Facilities with the ADMS	Dept. 18	9

<u>Task</u>	<u>Estimate</u>	<u>Staff</u>	
Air Traffic Control Integration	Dept. 16	Covered	
WS-217A (F-101B) Integration Plan	Dept. 18	1	
WS-201B (F-106A) Integration Plan	Dept. 18	1	
Integration of Superhawk into the ADMS	Dept. 11	4	
NORAD COC Integration	Dept. 17	3	
ADMS System Description	Dept. 11	47	
MITRE Support of ADSID Directorate of Intelligence	CWF	1	
Master Schedule for ADMS	Dept. 18	20	
Program Control Charts	Dept. 18	1	
Long Range Logistics Studies	Dept. 18	6	
Logistic feasibility studies of selected items of equipment proposed for integration into the missiles systems program	Dept. 18	}	
Evaluation of logistical concepts and plans for support of Air Defense Aircraft Weapons Systems	Dept. 18		
Logistic feasibility studies on equipments proposed for integration into electronic environment	Dept. 18		
Simultaneous analyses of logistic considerations during development and preparation of documents	Dept. 18		
Analysis of requirements and availability of effective Ground Environment System peculiar to Aircraft Weapons System	Dept. 18		
Analysis of logistic plans, programs and documents issued by AMC agencies for the electronic environment	Dept. 18		
Provision of guidance in the technical fields in support of implementation of OPI monitorship responsibilities in the missiles fields for those missiles for which AMC has assumed executive responsibility	Dept. 18		
Technical evaluation of individual program slippages to determine impact on time phasing of the missile program	Dept. 18		
Impact studies of Aircraft Program changes on logistic phases of the Air Defense Mission accomplishment	Dept. 18		25
Analysis and evaluation of proposed modification programs for installed or contracted electronic environment equipment	Dept. 18		

<u>Task</u>	<u>Estimate</u>	<u>Staff</u>
Analysis and Evaluation of ECP's affecting electronic environment equipment	Dept. 12)	
Evaluation of significant engineering change proposals which effect logistical aspects of integration	Dept. 18)	
Logistic Studies of New Air Defense Systems Ingetration	Dept. 18)	
Logistic Feasibility Studies on MITRE developed equipment	Dept. 12)	
Attendance and support at meetings	CWF	
Technical Support	Dept. 18)	
Experimental SAGE Sector (ESS)	Dept. 12	82
704 - 709 and Card Room	Dept. 19	28
Management Analysis Services	CWF	25
Program Data Mechanization	Dept. 19	2
Air Defense Installations Time Phasing Charts	JCP Service	
Analysis of Base Utilization	Dept. 18	10
Installation Facilities for Weapon Systems	Dept. 18	10
Real Property facilities peculiar to F-108 and/or F-108	Dept. 18	10
BOMARC real property facilities	Dept. 18	5
Housekeeping Support, etc.	JCP Service	
NORAD COC	Dept. 17	13
BMEWS Integration	Dept. 17	10
Ballistic Missile Defense	Dept. 17	18
IR Satellite Subsystem G. Integration	Dept. 17	4
Anti-Satellite Defense System	Dept. 17	6
IMX	Dept. 11	3
Natural and Man-made Phenomena	JFJ	2
Advanced Manned Interceptor	Dept. 11)	2
FD Radar Test	Dept. 12	77

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<u>Task</u>	<u>Estimate</u>	<u>Staff</u>
SAGE Category III Tests	Dept. 14	1
IM-99A/SAGE Tests	Dept. 14	21
BOMARC IM-99B/SAGE Testing	Dept. 14	27
F-101B Test Program	Dept. 14	2
F-106 Test Program	Dept. 14	2
Time Division Data Link Tests	Dept. 12	6
AD/ATC Test Program	Dept. 16	4
F-108 Test Program	Dept. 14	1
IFF Test - Mark XII	Dept. 12	4
WSEG/SAGE Tests	Dept. 14	3
SAGE/AEW&C Tests	Dept. 14	25
SAGE/BMEWS Test	Dept. 17	2
SAGE/AICBM Test	Dept. 17	Covered
SAGE/Mixed Weapons Test	Dept. 17	4
Missile Master/SAGE Tests	Dept. 14	3
SAGE/Blast Detection System Test	Dept. 14	2

The following additional work is not covered in the above tabulation:

ECM Test Support	5
Component Techniques	20
Interference Studies	4
Training Techniques	5
Experimental Super CC Planning	10
Liaison	<u>10</u>

Grand Total

889 man yrs

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<u>Extraordinary Expense</u>		<u>K\$</u>
BOMARC B	Test support equipment and rentals at Montgomery.	100
NIKE	Expenses associated with SAGE Army/Weapons tests.	250
FD Radar	Connect Boston Hill to ESS.	250
AEW&C	Equipments to demonstrate integration techniques in ESS.	1000
Mark XII	Install and test Mark XII equipment in ESS.	100
CCM	Installation of ECCM modifications in ESS.	500
TDDL	Modification of TDDL system in ESS.	200
SACCS ATC	Demonstrate techniques in ESS.	200
FSQ-7A	Modify ESS to simulate super combat center features.	250
NORAD COC	NORAD intends to build a proper control center for its operations.	<u>250</u>
Total Extraordinary Expense		3100



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ELECTRONIC STOCK, OFFICE SUPPLIES, FURNITURE, ETC.

Office Equipment (161 Staff at 570)	\$91,770
(60 Secretarial at 760)	45,600
Stationery Stores (75% of Lincoln FY '58 experience)	84,750
Auto Rental (30 cars at \$130/mo.)	46,800
Reproduction Paper & Supplies (based on Div. 6 experience)	75,000
Outside Printing	75,000
Janitorial Supplies	28,800
Electronic Stock (50% of Lincoln FY '58)	630,500
Postage	20,000
Communications (Lincoln Buildings)	252,000
Storage	6,600
Photo Equipment	16,000
Machine Tools & Shop Equipment	200,000
Reproduction Equipment	30,000
Library	60,000
	<u>\$1,662,820</u>

MITRE BUILDINGS (AIR FORCE)

Janitorial Service (current cost + 5%)	\$78,000
Communications (current cost + 5%)	139,000
Building Maintenance & Alterations	62,000
Fire & Plant Protection (current + 5%)	85,000
	<u>\$364,000</u>

MITRE BUILDING (RENTED)

Rental (100,000 sq. ft. at \$3.00/yr.) - 12 months	\$300,000
Operating Costs	236,000
	<u>\$536,000</u>

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<u>Page</u>	<u>Task</u>	<u>No. Staff</u>
1.	System Description	47
2.	Management Analysis Services	25
3.	Evaluation SAGE Sector (ESS)	100
4.	Program Data Mechanization	2
5.	Housekeeping Support	63
6.	Periodic Performance Reports	2
7.	Communications	31
8.	Identification	8
9.	Vulnerability of Electronic Systems to ECM	10
10.	SAGE Category III Tests	1
11.	System 216L	45
12.	Integration of the Ballistic Missile Early Warning System with the ADMS	10
13.	Airborne Early Warning & Control	4
14.	Airborne Early Warning & Control Personnel and Training Requirements	2
15.	SAGE/Mixed Weapons Test	4
16.	FD Radar Test	77
17.	Integration of DEW Line Facilities with the ADMS	9
18.	Integration of Air Traffic/Air Defense Control	18
19.	Missile Master/SAGE Tests	3
20.	IMX	3
21.	Advanced Manned Interceptor	2
22.	IM-99 (BOMARC)	) 6
23.	IM-99A/IM-99B Joint Use	
24.	BOMARC IM-99 B/SAGE Testing	27
25.	IM-99A/SAGE Tests	25
	Component Techniques	20

<u>Page</u>	<u>Task</u>	<u>No. Staff</u>
26.	WSEG/SAGE Tests	3
27.	Airborne Long Range Input (ALRI)	17
28.	Personnel Manning and Training	3
29.	F-101B Test Program and Integration Plan	2
30.	WS-201B (F-106A) Integration Plan	1
31.	F-106 Test Program	2
32.	WS-202A (F-108)	9
33.	NIKE	7
34.	Integration of Superhawk into the ADMS	4
35.	Logistics Feasibility Studies of Weapon and Support Systems	15
36.	Evaluation of Significant Engineering Change Proposals that Affect Integration of the Air Defense Weapon System and the Electronic Environment	15
37.	Technical Support in the Logistics Area	15
38.	Ballistic Missile Defense	18
39.	NORAD COC	13
40.	Integration Specification Preparation	76
41.	Integration of Army and Navy Forces into the Continental Air Defense System	2
42.	Integration of ANG and AFR into the Air Defense Mission System	1
43.	Air Defense Mission System Improvement Program	5
44.	New Systems	10
45.	Nuclear - Investigation of Effects of Blasts on the ADMS	1
46.	Anti-Satellite Defense System	6
47.	Participation in OEP Conferences	12
48.	Application of New Techniques and Scientific Breakthroughs to the Air Defense Mission System	10

ALRI (TEST)

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