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DEPARTMENT OF DEFENSE
NATIONAL SECURITY AGENCY
WASHINGTON 25, D. C.

R/AE 74

~~SECRET~~

19 July 1955

DECISION ON R/AE 74

on

MURDOCK

1. On 19 July 1955 the Director, National Security Agency, approved the recommendations in RADAC R/AE 74 and forwarded the task to the Office of R/D for necessary action.

2. This decision now becomes a part of and shall be attached as a top sheet of RADAC R/AE 74.

Ann M. Marley
ANN M. MARLEY
Executive Secretary
Research and Development
Advisory Council

Decision on RADAC R/AE 74

REF ID: A57067
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DEPARTMENT OF DEFENSE
NATIONAL SECURITY AGENCY
WASHINGTON 25, D.C.

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Prepared: Secretariat
Recommended: RADAC
Date: 7 July 1955
Approved: Director, NSA
Date: _____

REPORT BY
THE RESEARCH AND DEVELOPMENT ADVISORY COUNCIL
TO DIRECTOR, NATIONAL SECURITY AGENCY

MURDOCK

PROBLEM

1. To establish a task for the design and development of an analytic machine for deriving Hagelin C-38 wheel settings by the use of short cribs.

DISCUSSION

2. Inclosures: A. Task Summary Sheet
B. Task Background Sheet

CONCLUSION

3. It is concluded that:

a. There is a need for a device capable of deriving Hagelin C-38 wheel settings by the use of short cribs due to the inadequacy of HECATE to deal with short cribs and to relieve the current heavy time consumption on computers.

RECOMMENDATIONS

4. It is recommended that:

- a. A task be established for the design and development of MURDOCK.
b. Data contained in the inclosures be approved.

CONCURRENCES

5. The following members/alternates concur in the recommendations of this report:

R/D - Dr. S. Kullback	COMP - Lt. Col. C. K. Milroy
PROD - Mr. Dale Marston	E/P - Mr. L. E. Shinn
COMSEC - Lt. Col. K. I. Davis	LOG - Col. N. T. Kincaid

6. The following observers were present: Mr. A. B. Clark, DD/RD, Mr. A. Rose, Mr. C. Schierlmann, Mr. M. M. Mathews, Mr. J. Crona, Dr. E. Callen, R/D; Mr. T. Chittenden, COMSEC; Mr. J. Tasker, LOG.


S. KULLBACK
Chairman
Research and Development
Advisory Council

Task No. 353-7509

R/AB 74

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Approved AETO
Date 25 May 55
Recommended RADAC
Date _____
Approved DIRNSA
Date _____

TASK REPORT BY THE ANALYTIC EQUIPMENT TECHNICAL
COMMITTEE TO RADAC ON MURDOCK

PROBLEM:

1. To establish a task for the design and development of an analytic machine for deriving Hagelin C-38 wheel settings by the use of short cribs.

DISCUSSION:

2. Enclosures: A. Task Summary Sheet
B. Task Background Sheet.

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RECOMMENDATIONS:

4. It is recommended that:

- a. A task be established for the design and development of MURDOCK.
b. Data contained in the enclosures be approved.

CONCURRENCES:

5. The following members/alternates concur:

Mr. Bowman	30
Mr. Gordon	30
Dr. Leibler	30
Mr. Hopper	06
Mr. May	06

C. J. Schierman
C. J. Schierman
Chairman, AETO
RADAC

Task No. 353-7509

R/AE 74

~~SECRET~~

TASK NO. 753-7509 NOMENCLATURE AFSAF D91A COVER NAME MURDOCK
 TITLE Short Crib Wheel Setter
 PROJECT ALPHA SUB PROJECT Special Problem Equipments
 SECURITY CLASSIFICATION SECRET PRIORITY 1B TECHNICAL OBJECTIVE IO-9
 STARTING DATE Upon Approval COMPLETION TARGET DATE December 57 NO. & TYPE OF MODELS Two Operational
 APPROVED _____ DATE _____

REQUIREMENT

1. Origin of Request: NSA
2. Principal Application: Derivation of Hagelin C-38 wheel settings by use of short cribs.
3. References:

DESCRIPTION

To develop and deliver two operational models capable of deriving Hagelin C-38 wheel settings by use of short cribs.

DEVELOPMENT PLAN

The plan consists of performing contract negotiations for the development and delivery of two MURDOCK equipments in 2½ years or less.

COST DATA

	Estimated Total Cost	Expenditures Prior to FY 56	Estimate of Expenditures		
			FY 56	FY 57	FY 58
(Man Years)	9	1	2	4	2
(Labor Cost)	\$50,304	\$5,408	\$11,024	\$22,448	\$11,424
(Purchases)	None	None	None	None	None
(Contract)	\$550,000	None	\$250,000	\$200,000	\$100,000
TOTAL COST	\$600,304	\$5,408	\$261,024	\$222,448	\$111,424

PROGRESS TO DATE

Discussions with PROD and R/D to formulate equipment functional characteristics and requirements. Some preliminary pre-contractual discussions have been held with a possible contractor.

The Purchase Description is being prepared.

PRODUCTION PLAN

None

Enclosure A

R/AE 74

Date Prepared 25 May 55

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TASK BACKGROUND SHEET

TASK NO. 353-7509

CLASSIFICATION ~~SECRET~~

I. Completion Date December 1957

II. Operational Requirement

A. Operational Use

1. Specific problems solved.

Derivation of Hagelin C-38 wheel settings using cribs 5 to 8 letters long.

2. Relationship to associated equipments, systems and/or a broad program

MURDOCK is planned to be a more complete solution device than HECATE in that it tests for all wheels plus secondary testing.

B. Will replace - 80 hours per week of computer time.

1. Necessity - Present volume of work requires an excessive amount of computer time which will be eliminated by the use of MURDOCK.
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III. Production Cost Data - Not Applicable

DATE PREPARED 25 May 55

Enclosure B

R/AE 74

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