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.

[Signature]

ANN M. MAHLEY
Executive Secretary
Research and Development
Advisory Council

Decision on RADAC R/AE 74
The Research and Development Advisory Council

To Director, National Security Agency

**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 cribes.

**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 cribes due to the inadequacy of HECATE to deal with short cribes 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.

**Concurrents**

5. The following members/alternates concur in the recommendations of this report:
   R/D - Dr. S. Kullback
   PROD - Mr. Dale Marston
   CONSEC - Lt. Col. K. I. Davis
   COMP - Lt. Col. C. K. Milroy
   R/F - Mr. L. E. Shinn
   LOG - Col. M. T. Kincaide

6. The following observers were present: Mr. A. B. Clark, DD/BD; Mr. A. Rose, Mr. C. Schierlmann; Mr. N. M. Mathews, Mr. J. Crome, Dr. E. Calle; B/D; Mr. T. Chitten-den, CONSEC; Mr. J. Tasker, LOG.

S. Kullback
Chairman
Research and Development Advisory Council

Task No. 353-7509

Approved: Director, NSA

Date: 7 July 1955

Prepared: Secretariat

Recommended: RMDAC

Date: ___________________
TASK REPORT BY THE ANALYTIC EQUIPMENT TECHNICAL
COMMITTEE TO RADAG 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.

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 HEURATE 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 enclosures be approved.

CONCURRENCES:

5. The following members/alternates concur:

   Mr. Bowman  20
   Mr. Gordon  20
   Dr. Leibler  20
   Mr. Hopper  06
   Mr. May  06

Task No. 355-7509

2/13 74
NOMENCLATURE: SAF-91A

PROJECT: ALPHA

SUB PROJECT: Special Problem Equipments

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

<table>
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<tr>
<th>Estimated Total Cost</th>
<th>Expenditures Prior to FY 56</th>
<th>Estimate of Expenditures FY 56</th>
<th>FY 57</th>
<th>FY 58</th>
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<tr>
<td>(Man Years)</td>
<td>9</td>
<td>1</td>
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<td>(Labor Cost)</td>
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<td>(Purchases)</td>
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<td>$5,408</td>
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</table>

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

Date Prepared: 25 May 55
TASK BACKGROUND SHEET

TASK NO. 352-7509

CLASSIFICATION SECRET

I. Completion Date December 1957

II. Operational Requirement

A. Operational Use

1. Specific problems solved.
   Derivation of Magelin 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.

III. Production Cost Data - Not Applicable

DATE PREPARED 25 May 55

Enclosure B  R/AE 74