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Memorandum M-1078

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CLASSIFICATION CHANGED TO:
A U: DD 254
B: R KEVELETT
Date: 12/2/59

Electronic Computer Division
Servomechanisms Laboratory
Massachusetts Institute of Technology
Cambridge, Massachusetts

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SUBJECT: BI-WEEKLY REPORT, PROJECT 6782 AUGUST 4, 1959

To: J. W. Forrester

1. GENERAL
(R. A. Nelson)

The decimal classifications for the bi-weekly reports of this project will be as follows:

- 1. General
- 2. The Fire Control Problem
 - 2.1 Data Smoothing and Target Position Prediction
 - 2.2 Ballistic Considerations
- 3. Coding
- 4. Data Conversion
- 5. Demonstration
- 6. Publications Issued

During a three-day visit to Washington I met and talked briefly to representatives of ONR, BuOrd, NRL, and CEG. Several reports of possible interest were suggested, and we are trying to get them.

2. THE FIRE CONTROL PROBLEM
(R. A. Nelson)

I have been studying the parts of Naval Ordnance and Gunnery that pertain to AA fire control (particularly for the standard nomenclature and notation) and the beginning of Blackman, Bode, and Shannon. I have also read a little of the theory of the Mark 50 Director and associated Mark 10 Computer.

(J. N. Dodd)

Some preliminary work has been done on the kinematics of the idealized prediction problem. In addition, I have read parts of Gunsight Mark 15, Vol. I (Confidential) and Blackman, Bode, and Shannon, Data-Smoothing & Prediction in Fire Control Systems (Confidential).

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3. CODING

(J. M. Dodd)

Programs for sine and cosine have been prepared to meet the anticipated specialized requirements of the fire control problem. A program for arcsine is partially completed. The solution of a fourth degree algebraic equation will probably be programmed in the near future.

cc: J. M. Dodd
R. R. Everett
H. Fahnestock
W. G. Welchman
C. R. Wieser

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