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Air Traffic Control Project
Servomechanisms Laboratory
Massachusetts Institute of Technology
Cambridge, Massachusetts

SUBJECT: BI-WEEKLY REPORT, APRIL 28, 1950

1.0 GENERAL

(W. G. Welchman)

Work on Summary Report 5 continues.

(C. R. Wieser)

Most of the past period was spent preparing an AIEE paper on digital computers in control systems.

Visited Cambridge Field Station to discuss pulsed radar.

(W. K. Linvill)

Investigated the use of air brakes as an aid to keeping an airplane on schedule during glide in from 40,000 feet in the presence of violent changes in wind. Using air brakes extended the linear range of the system by about a factor of 5. The main disadvantage arises from the fact that fuel consumption on the glide is greatly increased. The procedure will be discussed in detail in an engineering note.

(A. Orden)

Most of the thesis report has been completed. A few small sections of writing and the details of final assembly remain to be done.

(D. R. Israel)

Further study has been given to the problems of an altitude-scheduled descent system in the approach zone of an airport. The work is hindered, to a certain extent, by inadequacy of knowledge of the flight (cruising and descent) characteristics of high-speed, high-altitude aircraft. It appears that although the idea of an altitude schedule has considerable merits, these advantages are not without certain

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(D. R. Israel) -- continued

drawbacks. In particular, difficulties are experienced in introducing aircraft into the system since lower altitude aircraft must fly level in certain regions in which high speed aircraft are descending on the altitude schedule.

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