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

SUBJECT: BI-WEEKLY REPORT, MARCH 17, 1950

1.0 GENERAL

(W. G. Welchman)

More thought was given to the comparative merits of approach systems of different kinds. A good system should be flexible enough to take full advantage of conditions of good visibility, low traffic density, and light wind. Under such conditions there should be a minimum of lost time and any loss of time that may be introduced to provide for more severe conditions must be justified by the results achieved. An attempt is therefore being made to isolate the various objectives of an approach system and to compare the cost of achieving them in systems of different types and under conditions of varying severity.

An interesting visit was paid to Sperry on March 15. On the previous day they had made their first experimental flight with their manual and automatic path following instruments, using their recently developed navigation system.

(C. R. Wieser)

A complete draft of Summary Report 4 has been checked by Mr. Ulman. Illustrations have been sketched and sent to the drafting room.

(W. K. Linvill)

Completed work on appendices for Summary Report 4. Wrote a memorandum defining standard axis for aircraft and ground coordinates which our terms should be consistent with.

(A. Orden)

The effect of steady wind on azimuth progress control was analyzed. First, azimuth deviations were found when wind is present but the azimuth and heading schedules do not take it into account. Second, a revised heading schedule was found which would permit a/c in the system to maintain a constant rate of azimuth progress.

1.0 GENERAL

(D. R. Israel)

Revisions were made in the final draft of the E note concerned with the approach to the helix. This note is presently being typed.

A great deal of time during the past two-week period was spent in reading A.T.C. material -- that of our project (Summary Report IV, parts of Orden's thesis, the Lantrac analysis, the Approach from High Altitudes), material on air brakes, and literature presently being received in response to requests for material to be used in the E. E. Seminar.

At the present time, considerations are being given to syatems of approach from high altitudes, with emphasis on random arrivals.