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Memorandum M-2476

Page 1 of 63

Division 6 - Lincoln Laboratory
Massachusetts Institute of Technology
Cambridge 39, Massachusetts

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To: Jay W. Forrester
From: Division 6 Staff

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CONTENTS

Section I - Cape Cod System	1
1.1 - Group 61	1
1.2 - Group 64	24
1.3 - Group 65	34
Section II - AN/FSQ-7	35
2.1 - Group 62	35
2.2 - Group 63	56
Section III - Central Services	60

SECTION I - CAPE COD SYSTEM

1.1 Group 61

1.10 General

(C.R. Wieser) (CONFIDENTIAL)

Operating reliability of the Cape Cod System equipment has been considerably better during this period. Attempts at full operation including weapons control during the first week gave poor results because of the short duration of target tracks and inability to get good interceptor tracks. As a result, the second week of the period was devoted to program debugging and reconsideration of the tracking parameters.

Several experiments in tracking simulated targets (simulated data is sampled and quantized) indicated that the tracking worked well. Minor improvements were made by parameter adjustment, but these may actually make the tracking slightly worse in the presence of noise. The tests indicate that the tracking trouble arises from the difference between real and simulated radar data. Some of the difficulty may have been caused by slowed-down-video (SDV) timing trouble (see Kirshner's report). Also, low blip-scan ratio has led to a good deal of tracking trouble. The tests with simulated data

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1.3 Group 651.31 Activities of Group 65

(P. Youtz) (CONFIDENTIAL)

This biweekly period was the scheduled vacation for most of Group 65. Those persons who had taken a previous vacation did maintenance work in the tube lab. Most of the storage and research tubes that could not be used in WWI were destroyed.

Several members of Group 65 attended the National Conference on Tube Techniques in New York City on October 13, 14, and 15, 1953. This conference was sponsored by the Sub-Panel on Electron Tubes of the Office of the Secretary of Defense. A copy of the abstracts of the conference are on file in the library at the Whittemore Building.

I attended conferences with the IBM Tube-Analysis Group on October 16. I visited Tektronix, Inc. on October 19 with members of Group 25. We studied a new type of coating for cathode-ray tubes to permit high post-acceleration with high-deflection sensitivity. After a period of experimentation we will be prepared to make these coatings.

On October 20 we visited Hughes Aircraft to observe their progress on the Typrotron. The Typrotron is an all electrostatic display-type storage tube with a Charactron-type matrix for writing characters on the storage surface.

On October 21 we visited the Research Department at Motorola to discuss improvements on their Deflectron--an internal electrostatic-deflection yoke. Motorola will incorporate these improvements as soon as Group 25 prepares the necessary drawings.

Together with other members of Division 6 and IBM, I visited General Electric at Owensboro, Kentucky, on October 22 and 23. We discussed the progress on the Z-2177--a more reliable 5965. Progress on this new tube is very satisfactory at the present moment.

1.32 TestTelevision Demonstrator

(A. Zacharias) (UNCLASSIFIED)

During the past biweekly period time was spent deciding which storage tubes should be kept and which should be destroyed. The tubes that we are keeping will be checked at the TVD.

The ion gauges in the vacuum-tube lab were examined, and defective tubes were replaced.

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