

Forrester

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

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Auth: *DDJ 54*
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Date: *3-15-60*

SUBJECT: GROUP LEADERS' MEETING, November 23, 1953

To: Group Leaders

From: David R. Brown

Date: November 25, 1953

Present: Jay W. Forrester, D. R. Brown, S. H. Dodd, R. R. Everett,
J. C. Proctor, N. H. Taylor, C. R. Wieser, and P. Youtz

- Agenda:
1. Salary Increases
 2. IBM Time Schedules
 3. Duplex Computer Installations
 4. Charactron
 5. November 17 ADA Meeting in New York
 6. Colorado Springs
 7. Test Equipment Committee
 8. Stepping Registers
 9. Radar Mappers
 10. Air Conditioning for AN/FSQ-7 (XD-1)

1. Salary Increases

Proctor has a list of six staff members who received no salary increases on July 1, 1953, because they were hired in the spring of 1953 and three or four other cases which require special consideration at this time. Forrester will review each case with Proctor and make appropriate recommendations.

2. IBM Time Schedules

Plans no longer call for the use of AN/FSQ-7 (XD-2) in testing XD-1. XD-1 will be shipped to Lexington as soon as construction has been completed in Poughkeepsie. This change in plans causes no difficulty except in the case of the magnetic drums. The design for the drums now places all of the drums in one frame so that partial deliveries cannot be made. The schedule for the drum work must be arranged so that the complete magnetic-drum equipment can be shipped with the rest of XD-1.

Component procurement is lagging at IBM and it appears that if only approved standard components are used the time schedule cannot be met. Many component specifications are still being written. Invitations for

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bids are out for ten percent of the components and delivery promises have been received for approximately one percent. In order to keep production on schedule, the specifications will be waived for some components to be used in XD-1. Plug-in units employing components thus purchased will be replaced at a later date with plug-in units employing standard components. Careful records will be kept of any non-standard components used in temporary construction.

On November 19, Dodd talked with J. H. Fraizer, R. Whalen, and R. A. Stewart in Plant 2 on production plans for XD-1 and XD-2. These men appear quite competent, are determined to meet end dates, and will work on a crash basis if necessary. They believe engineering at High Street is late in production releases but find High Street very cooperative. They also stated that engineers tend to overestimate the difficulty of making production changes. Facilities for making production changes exist and can be used. The production group is anxious to proceed with the job.

Two design changes are being considered at the present time. MIT has asked IBM to use a medium-power cathode follower in place of parallel low-power cathode followers to decrease the total number of tubes. IBM is considering deleting the tubes provided for the check register. No decision has been reached on either of these proposed changes.

We should consider what we can do to help IBM during this critical period. Perhaps some of our senior men should spend more time at Poughkeepsie, even living there if that would help. At the present time, however, new technical developments and improvements are being made as the result of studies carried on at MIT. If those who are doing this development at MIT were to move to IBM, the development would cease. In addition, MIT's work on the MTC provides an important backup to most of the work at High Street.

Ed Quick of Project High will be in charge of the installation of XD-2 and is working with Hugh Wainwright, and Jackson and Moreland, on the installation of XD-1. Quick will determine from the FSQ-7 design engineers how much will be required of Jackson and Moreland.

3. Duplex Computer Installation

As a result of a meeting with ADA, plans now call for the installation of production computers in pairs. This results in an increase in the number of computing elements but a decrease in the amount of terminal equipment. No changes will be made in the XD-1 design, but some redesign must be incorporated in production machines. High Street does not have manpower for this redesign; additional manpower should be assigned soon.

The decision for duplex computer installations presents no serious technical problems except possibly in the display consoles. There the circuits for interconnection of push buttons on the console with the drums may be troublesome. The present proposed system is not entirely satisfactory anyway. The duplex installation raises the question of how much input-output equipment should be duplicated.

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4. Charactron

Convair has submitted a tentative bid to provide display units, asking \$750,000 for development and \$1,500,000 to provide the units for XD-1. Convair's tentative bid is believed to be unreasonably high.

5. November 17 ADA Meeting in New York

Discussion at the November 17 ADA meeting in New York included consideration of fiscal matters. Evidently money for the first three production machines is available from '54 funds. Air Force approval has been obtained for six more machines but the request has yet to go to a congressional committee. Air Force Headquarters requested additional information to present to Congress, such as the exact location of centers, etc.

6. Colorado Springs

Jack Arnow spent one and one-half weeks at Colorado Springs giving lectures on the FSQ-7 system to various people in the Air Defense Command. The Lincoln Laboratory plans to send a representative every other week. Suggestions should be made for additional persons to visit Colorado Springs.

7. Test Equipment Committee

The Test Equipment Committee has reviewed the test equipment program with particular reference to the move to Lexington. The instrument rooms and test equipment facilities of the other divisions of the Lincoln Laboratory have been studied. Present plans call for a continuation of Division 6 maintenance and handling of commercial test equipment and standard test equipment. No attempt to set up central facilities for test equipment maintenance and distribution will be made before the move to Lexington. Some coordination of this activity will be required in Lexington but plans can best be made after the move is accomplished and the need for such arrangements becomes apparent. However, plans will be made for a centralized meter calibration and repair service.

8. Stepping Registers

Brown, D. Buck and W. Fapian accompanied representatives of IBM during a visit to Raytheon to discuss stepping register development with R. Codis and Way Dong Woo on November 17. Raytheon appears to be well equipped to handle the stepping register job and to provide the five units required at the end of four and a half months. Some difficulties in the proposed design are apparent, however, such as the use of a large number of turns of No. 40 wire on a small magnetic core. Taylor will investigate these difficulties and see that they are corrected.

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9. Radar Mappers

The proposal for the design of the radar mappers, which is ready for release to Bendix, will be reviewed at MIT before the release. An engineering model of the mapper is to be ready for installation in the Cape Cod System by January 1.

10. Air Conditioning for AN/FSQ-7 (XD-1)

Jackson and Morsland are anxious to know their responsibilities for air conditioning of AN/FSQ-7 (XD-1). The latest proposal from Francis Associates should be reviewed.

Signed David R. Brown
David R. Brown
Secretary

DRB/jk

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