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Memorandum L-145

Page 1 of 4

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

SUBJECT: GROUP LEADERS' MEETING, March 22, 1954

To: Group Leaders

From: David R. Brown

Date: March 22, 1954

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

- Agenda: 1. Memory-Core Procurement at IBM
 2. Barta Building Space After the Move
 3. Advanced-Development Activity
 4. Time-Schedule Report
 5. Duplex Central
 6. Cape-Cod Program
 7. MIT Responsibilities for Prototype and Production FSQ-7's
 8. Visits to Cape-Cod System
 9. Building F

1. Memory-Core Procurement at IBM

A meeting held at IBM on March 18 to discuss the IBM core-fabrication program was attended by D. Brown. John Little's group in Poughkeepsie expects to be making 5,000 good cores per day by July 1, 1954, and to increase its capacity so that it can serve as a source of supply for the FSQ-7 program.

A new time schedule for the XD-1 and XD-2 memories dated February 22, 1954, has been issued at High Street. This schedule calls for completion of core testing for the second memory bank by May 15, 1954. Although manufacture of these cores has been completed at General Ceramics, the order has not yet been placed. The order for the third memory bank should be initiated within the next two weeks if core delivery for the third memory bank is to begin May 15.

Relationships between IBM and General Ceramics have deteriorated to the point where General Ceramics is reluctant to transmit vital information to MIT for fear that this information might reach IBM.

2. Barta Building Space After the Move

J. C. Proctor will prepare plans showing the arrangement of space in the Barta Building after the move to Lexington. This will include an

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SECURITY INFORMATION

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Memorandum L-145

Page 2 of 4

enlarged stockroom, provide for the transfer of one man from Whittemore Building to the Barta Building, give more space to the Scientific and Engineering Applications Group, and allow space for several offices which will be available for persons having their main offices in Lexington.

3. Advanced-Development Activity

S. H. Dodd and R. R. Everett have discussed the advanced-development program, considering the interests of the Research Assistants in Building 10. Since one of the objectives of the program is to interest the Research Assistants into continuing their work in Division 6 after they complete their academic programs, they should be integrated into the Lincoln Laboratory program as closely as possible. This can be facilitated by integrating their component work into a system to be built up within Division 6. This system would be a new computer, possibly with the performance specifications of FSQ-7.

The activities in the advanced-development program should be discussed frequently at the Group Leaders' Meetings and considered in considerable detail, including the work of individual Research Assistants. W. K. Linvill has proposed that junior faculty members, mostly Assistant Professors, might become interested in the Division 6 program so that each one of them could supervise a small number of Research Assistants. The junior faculty member would always remain in touch with the needs of Division 6, functioning as a consultant to Division 6. W. K. Linvill would be the senior faculty representative, assisting in coordination of the entire advanced-development program.

The technical outline for the advanced-development program should be made at Group Leaders' Meetings. D. R. Brown's job should be to see that this outline is carried out, to discover omissions, and to arrange necessary liaison. D. R. Brown, S. H. Dodd, W. K. Linvill, and J. C. Proctor should prepare some specific proposals which can be discussed at the next Group Leaders' Meeting. These proposals should include the assignment of space for advanced development in the Barta Building and Building 10.

The administration of the Building 10 program has been discussed with Paul Cusick. It will be set up with a DIC project number and financed by transfer of funds or purchase order from Lincoln Laboratory.

Brown suggested that the Research Assistants now in Division 6, together with any other staff members who can participate, should hold regular meetings to initiate the program and start some investigations before the move takes place. At that time, some of the Research Assistants will go to Building 10 and other will be able to move to Lexington and work there for the summer, returning to Building 10 in the fall. This should make a smoother transition possible in getting the Building 10 program underway.

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Memorandum 1-145

Page 3 of 4

UNCLASSIFIED

The present transistor section in Group 62 will be transferred to Group 63 immediately, with no obligation for this group to continue work on transistors.

4. Time-Schedule Report

IBM time schedules were to have been posted and issued biweekly, with comments on the status of the work. The schedules have not been issued for two reasons. The first is that sufficient manpower has not been available and the second is that IBM is reluctant to issue in writing the status of the program. Arrangements are being made so that the schedules can be posted and issued at regular intervals but IBM is anxious that these time-schedule reports do not go to ADES.

MIT could agree to not forward copies of reports to ADES but could not agree to withhold information from ADES. MIT's policy should be discussed with J. M. Coombs and an IBM representative such as C. Lynch should represent IBM at meetings with ADES.

ADES and the Air Force look upon the Lincoln Laboratory as having the design responsibility for XD-1 and XD-2.

5. Duplex Central

The joint IBM-MIT meeting on duplex-central planning to have been held March 18 will be held March 23 at MIT. R. R. Everett, C. R. Wieser, B. E. Morriss and R. Walquist, in discussions held here, have reached the tentative decision that the two computers should not simply operate in parallel. One computer may be used to check the reasonableness of the output of the other. IBM has been working on the switching and synchronization of the two machines. These discussions are being written for distribution by B. E. Morriss.

The results of these meetings will be discussed with ADES and formalized, for the time being, by the engineering-design-office sign-off procedure. A list of suggested design changes for production machines is being prepared which embodies changes suggested both by the duplex-central planning group and by the XD-1 group. After the FSQ-7 design has been released for production, ADES will establish a review board to handle design changes. IBM and MIT will be represented on that board.

6. Cape-Cod Program

A number of changes in the Cape-Cod System have been proposed. To incorporate these changes would necessitate shutting down the Cape Cod System for approximately three months between June 15 and September 15, 1954. These changes include the expansion of the radar system, new mappers and mapper room, input for fine-grain radar data, modification of the track-monitoring setup, modification of the tracking officer's position to provide for added input, enlargement of the flight-test umpire's room, an increase in the programming flexibility for simulation, and some other programming changes.

~~CONFIDENTIAL~~

SECURITY INFORMATION

~~CONFIDENTIAL~~

Memorandum L-1145

UNCLASSIFIED

Page 4 of 4

Forrester will discuss these proposed changes with the Lincoln Laboratory Steering Committee.

7. MIT Responsibility for Prototype and Production FSQ-7's

Estimated manpower for operating FSQ-7 (XD-1) on a three-shift basis is 25 engineers and 38 technicians. IBM may provide a portion of this manpower. Discussion with IBM of the assignment of responsibilities for operation, maintenance, and improvement of XD-1 should be deferred until October. MIT, however, must have responsibility for machine improvements and be free to act on that responsibility. IBM should be urged to assign a member of the engineering design office to work as N. H. Taylor's assistant so that IBM can be kept in close touch with modifications of XD-1.

The Air Force and ADES expect MIT to take the responsibility for production changes, design of the duplex center, and duplex-central operation. We should prepare for this responsibility, at least for the first two or three duplex centers. Personnel should be trained in Lexington to take part in the duplex-central program. The training of technicians for XD-1 is a more immediate need. System technicians will be added to the MTC group at the rate of two per month beginning now.

8. Visits to Cape-Cod System

Arrangements have been completed for visits to the Cape-Cod System which will not seriously interfere with the Group 61 program. These visits may take place on Thursday afternoons and will include a tour of the control room with the lights on in the late morning, a briefing between 1:30 and 3:00 pm, and an operational view of the control room between 3:00 and 4:30.

A group from ADES has asked for a three or four day visit to the Lincoln Laboratory which will include a visit to the Cape Cod System, discussions with the FSQ-7 design group, and with Division 2.

9. Building F

Eighty-seven contractors have requested specifications and plans to prepare bids for Building F.

Signed

David R. Brown
David R. Brown
Secretary

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