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Memorandum L-110

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

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SUBJECT: GROUP LEADERS' MEETING, February 8, 1954

To: Group Leaders

From: David R. Brown

Date: February 9, 1954

Present: J. W. Forrester, D. R. Brown, S. H. Dodd, R. R. Everett,
J. C. Proctor, N. H. Taylor, C. R. Weiser, P. Youts,
and for Item 2, J. B. Bennett, H. D. Bennington, W. N. Papian,
J. R. Freeman, K. E. McVicar, R. A. Nelson

- Agenda:
1. Time Schedule for FSQ-7 (XD-1)
 2. Quarterly Progress Report
 3. Meeting with WE and BTL on February 4 and 5
 4. IRE National Convention
 5. IBM-ADES Liaison
 6. Telephone Planning
 7. January 1 Salary Review
 8. Silver Migration
 9. Magnetic Circuit Research
 10. Meeting at AMC
 11. NACA Meeting at MIT
 12. Building Schedule

1. Time Schedules for FSQ-7 (XD-1)

A careful review and new estimate of the time schedules for FSQ-7 (XD-1) carried out by IBM in Poughkeepsie during the week of February 1 disclosed that XD-1 cannot be delivered until four months after the originally-scheduled date. IBM management sees "cause for concern" over this delay. High Street has prepared a proposal for getting back on schedule. The proposal includes the following points:

- "1. We will try to get more I.B.M. engineers to assist the Project.
2. We will hire more sub-contract engineers.
3. We will make sure that we do the minimum amount of work on drawing and print handling without adversely affecting reliability.

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4. We will request M.I.T. to assist in the responsibility for the following items:
 - a. Design of the outputs frame.
 - b. Design of the Digital Data Transmission System.
 - c. Design of the Display Generator Frames.
 - d. Prepare the site for installation of transformers, M G sets, power supplies, air conditioning, false ceiling, ETC for XD-1.
 - e. Send a few engineers to Poughkeepsie to assist us in design of the memory."

IBM asks that we take complete responsibility for the items listed under 4 above.

IBM's most urgent need is for a block of engineers to work on the central computer. The parts we are asked to work on do little to assist the central computer. They are jobs which have received little or no effort from IBM. IBM's proposal does not include the possibility of shipping XD-1 to Lexington without tests at Poughkeepsie. This may be necessary if XD-1 is to be delivered by November 15. MIT must be in a position to perform the required tests at Lexington in case XD-1 is shipped without tests.

R. R. Everett, N. H. Taylor, and S. H. Dodd will prepare a reply to IBM's proposal, stating what MIT can do. They will also propose a test program for XD-1, assuming that XD-1 will be delivered in November. We must not undertake so much work for IBM that we will be unable to meet our primary responsibilities. Emergencies can be expected here which will prevent committing all of our engineering to the IBM program.

Item 4(a) calls for the design of the outputs frame. Hawley Rising has been close to this work and knows the basic circuits. Packaging, however, would be difficult for us.

Item 4(b) calls for the design of the digital data-transmission system. This calls for a transmitter and receiver for cross-telling telephone lines. Group 24 will do the basic design. This would have to be re-engineered in Division 6; packaging would be difficult.

Item 4(c) calls for the design of the display-generator frames. C. Corderman is familiar with many aspects of this job. Packaging for the display-generator frames might be done by R. Mork's group at Endicott. Corderman would require more manpower if he undertook the engineering.

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Item 4(d) calls for preparation of the site for XD-1. Division 6, with help from Division 7, can undertake this.

In carrying out the above tasks, we would act as an engineering department for IBM, their purchasing department handling the costs. We would prefer to do the engineering design and have the packaging done elsewhere. We should examine the possibility of hiring people here to do the packaging, however. Proctor will report to Forrester in a day or two on the present and future load and distribution of work in the drafting room.

Convair has submitted a \$251,000 proposal to IBM for Charactron development. IBM, however, is negotiating with DuMont for Charactron development. A date should be set for a decision. J. W. Forrester and P. Youtz will call C. F. McElwain on February 8 to discuss the critical situation in Charactron development.

2. Quarterly Progress Report

The next Quarterly Progress Report will be divided into two parts. Part one will include feature articles on the more important aspects of the laboratory program during the quarter. Part two will be a brief inclusive report, by organization, similar to, but shorter than, our past Quarterly Progress Reports. The outline proposed for the March 15 report is as follows:

I. Feature Articles

- A. Cape-Cod Demonstrations
- B. FSQ-7 System Capabilities
- C. Physical Description of FSQ-7 (XD-1)
- D. Memory-Core Development and Test
- (E. Cape-Cod Terminal Equipment)

- II. This will follow the outline submitted by J. B. Bennett but will not include material in part one. The complete report will come to approximately 100 pages, 50 pages for part one and 50 pages for part two. Illustrations will be used liberally.

Feature articles for the June 15 Quarterly Progress Report will include: (1) Cape-Cod Test Program, (2) MTC, (3) Engineering Features of FSQ-7, including basic circuits and display, and (4) Vacuum-tube Program.

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3. Meeting with WE and BTL on February 4 and 5

The group from Western Electric and Bell Telephone Laboratories was interested in evaluating the transition system for its effectiveness in air defense, rather than in techniques and components.

4. IRE National Convention

Our previous policy with regard to expenses and leaves for attending technical conventions will be continued. Those who need to go for the laboratory program may have their expenses paid by the laboratory. Others will be given the time necessary to attend the convention.

5. IBM-ADES Liaison

N. H. Taylor recommends that we have a meeting with ADES in the near future to discuss IBM time schedules. C. Lynch would represent IBM at this meeting. A. P. Kromer can arrange the meeting.

6. Telephone Planning

One man should be appointed to coordinate telephone planning for voice communication in the FSQ-7 (XD-1) center. H. Kirshner is now doing this coordination for Group 61.

R. Cypser is now devoting some time to the study of the duplex center. Division 6 should also assign a man to this job, perhaps B. E. Morris, Jr.

Items 7 to 12 of the Agenda

Items 7 to 12 of the agenda are deferred until the next Group Leaders' Meeting.

Signed

David R. Brown
David R. Brown
Secretary *J.K.*

DRB/jk

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