

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

SUBJECT: Group 62 Section Leaders Meeting -- January 18, 1954

To: Division 6 Group Leaders; Group 62 Staff Members

From: A. P. Kromer

Abstract: Program for development of phone line specifications for reliable data transmission to be carried out by joint Bell System--Lincoln committee. For XD-1, 300 μ sec maximum delay in a triad of lines will be used as design basis. Display system specs are currently being circulated for comments.

1. Data Transmission

A meeting last week regarding this problem resulted in establishment of a joint A.T.&T. Co., BTL and Lincoln committee (Harrington and Rosen from Division 2 of Lincoln) to prepare specifications on the requirements of phone circuits. Most of the detail requirements are to be developed by the Lincoln representatives and will subsequently be circulated for comments. IBM is not represented on the committee since they wish to work to a definite specification, the requirements of which they do not feel they should be expected to generate.

In order to permit development work for equipment (which will be part of XD-1) to continue, Telephone Company representatives agreed that triads of circuits would be provided where the maximum difference in delay between them will not exceed 300 μ sec. Artificial delay will be added to balance all lines in a triad as required.

Telephone Company representatives stated that they believed the most difficult problem confronting reliable data transmission concerns impulse noise from various dial circuits.

Harrington's group will undertake development of a modulator and demodulator-receiver for transmission of output data from the FSQ-7 Central. The question concerning manufacture of these units by IBM or some other company will be determined later. In connection with this work, Harrington is to arrange a meeting to present to Bell Lab and the Telephone Company people the details regarding communication methods, number of lines, etc. for the planned output data system. The Bell System people wish to consider the plan from a reliability point of view as well as performance and economics.

2. Construction of Prototypes XD-1 and XD-2

In view of the imminence of a production contract, Project ADES representatives have indicated interest in the status of engineering development work being done by MIT and IBM. Since procurement of AN/FSQ-7 is limited to IBM as a single source of supply, ADES believe that a high degree of understanding of the status of development engineering and prototype construction is the only foundation on which production of subsequent equipment can be based.

3. Display

Discussions between Corderman and Mork have led to agreement on circuits which will be used for construction of an engineering model display console. IBM will proceed with plans for construction of this model; however, to crystalize the physical features of the console, a meeting of all interested persons will be held Tuesday, January 26 at MIT.

Development work to date indicates that design of a yoke with both suitable sensitivity and settling time may be a problem.

M-2606 covering specifications for design of a display system has been issued by vonBuelow. Comments are to be returned to the Systems Office by January 22.

Latest study indicates approximately 100 tubes will be in a console having both a large and a DID display tube.

4. MTC

The new 6h x 6h memory will be moved up to MTC on January 25. The drum will be moved up on January 21.

It is now expected that MTC will be moved from Cambridge to Lexington in May. Plans for installation in Building "B" will be prepared based on use of chilled water from the CRC central supply for equipment cooling.

5. Power Supplies

The question of discrepancy between power consumption figures prepared by Beeby and Gano and dissipation figures furnished to Phil Taber by Ed Quick is to be resolved. Gano stated that a check with G.E. Company revealed that the D-C supplies can be operated at 25 percent overload for an indefinite period without affecting the life of the equipment providing sufficient air is furnished to limit the temperature rise to the design figure.

Construction of supplies for XD-2 has been started and XD-1 will follow immediately. The XD-1 units will be ready for delivery by G.E. Company in mid-spring.

6. Basic Circuits

A meeting is scheduled for Wednesday, January 20, at Poughkeepsie to review with Sylvania tube engineers all planned circuit applications for the 7AK7.

The development program is proceeding satisfactorily with respect to switching for drum read-write circuits.

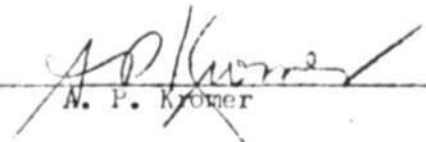
7. Design & Construction Release Approval

IBM will issue an H-Note this week detailing the agreed upon procedure for formalizing design and construction releases.


8. Meetings This Week at IBM

- Monday - Design specs for card machines to be considered for EDC-SO concurrence.
- Tuesday - Design specs for mappers to be considered for EDC-SO concurrence.
- Wed. - Design specs for display system to be considered for EDC-SO concurrence.
 - Discussion of Charactron development program and contract with Convair.
- Thurs. - Review and final approval for release of basic circuits for instruction control frame.
 - Engineering consideration of display distribution and selection design.
- Friday - Review of IBM schedules covering engineering development.

Signed:


A. P. Kromer

Approved:


N. H. Taylor

APK/nmt

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