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Memorandum 6L-229

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Division 6 - Lincoln Laboratory
Massachusetts Institute of Technology
Lexington 73, Massachusetts

SUBJECT: GROUP LEADERS' MEETING - November 28, 1955

To: Group Leaders and Associate Group Leaders

From: C. W. Farr

Date: November 28, 1955

Present: J. W. Forrester, R. R. Everett, J. A. Arnow, D. R. Brown, C. W. Farr,
D. R. Israel, J. F. Jacobs, B. E. Morriss, Jr., J. A. O'Brien,
J. C. Proctor, E. S. Rich, N. K. Taylor, P. Youtz

Agenda:

1. Space
2. Building F Security
3. Programming and Equipment Effort on Weapons
4. Remington Rand Developments
5. Tube Program
6. Component and Circuits Specification Releases

1. Space

Proctor stated that the Electronics and Stationery stock rooms have been moved during the past two weekends paving the way for personnel occupancy of the second floor of Building B when partitions are available. He proposed moving Division 2 people to the Field Station temporarily to permit consolidating the Group 6L space allocation and to permit the carpenters to work on the necessary partitioning of the first floor of Building D into which Newell wants to move by next weekend.

After discussion, Forrester suggested that Proctor check plans with Israel then approach Wieser for approval of proposed temporary move to Field Station.

2. Building F Security

O'Brien pointed to a seemingly unnecessary degree of red-badge visitor access to Building F under ETL escorting. It was agreed that O'Brien or Proctor should speak to ETL and any others who neglect to follow the procedure of notifying O'Brien's office prior to taking visitors into Building F.

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3. Programming and Equipment Effort on Weapons

Israel outlined the questions arising in connection with weapons integration into the SAGE System. The work load may approach twenty months for up to ten people for a single weapon. This would carry the work as far as the establishment of specifications but would not cover equipment changes involved.

Taylor spoke of the need for Lincoln attention to operating specifications, programming, and equipment phases of weapons integration.

Forrester summarized that work must be carried on without a net increase in Lincoln manpower load by arrangement with the weapons contractors to contribute, on a loan basis, manpower equivalent to the Lincoln man-hours required. Arrangements for borrowed manpower must be made in such a way that the contractors are able to work within their government agreements.

A recent letter from Col. LaMontagne relating to weapons needs to be answered along the above lines and Forrester arranged to meet with Jacobs and others after the Meeting to resolve details.

4. Remington Rand Developments

Taylor summarized results of discussion with Remington Rand representatives at the Computer Conference leading to a meeting at Lincoln December 1 and 2, attended by Remington Rand's Research Director and others, to discuss newly developed techniques in use of transistors, drum switching, etc. If feasible, this meeting is to be followed by a visit of Taylor, Brown, and others to Remington Rand. Questions arise in connection with the proprietary nature of this information.

Forrester agreed that it was necessary to establish and confirm, in writing, the basis of such disclosures to Lincoln; he agreed to lunch with Remington Rand's Research Director this week to discuss the problem.

5. Tube Program

At Forrester's request, Youtz summarized the status of tube production and deliveries for XD-1 and the production FSQ-7's.

All charactrons for XD-1 have been delivered; enough typotrons are on hand for operation; approximately twenty-five typotrons still to be received are spares.

Production difficulties have apparently diminished and IBM and MIT have phased out of the tube production trouble-shooting business leaving such responsibilities to Hazeltine.

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5. Tube Program (cont'd)

Problems on the West Coast for the past year have been actively followed by Gardner of Group 25, Corderman of Group 62, and Youtz of Group 65.

Stromberg-Carlson is in production starting about August 15 and is making deliveries to Hazeltine on schedule.

The typotron program at Hughes Aircraft ran into production difficulties during the summer; we are now advised that this difficulty has been corrected but we do not have access to Hughes' production facilities and can only judge from tubes shipped. The difficulties included leaking tubes; therefore, Hughes is holding tubes thirty days before shipping; thus, there is a time lag in our evaluation of production quality.

The Machlett Laboratory in Stamford, Conn. has been selected as a second source of supply of charactrons. Little progress has been made on a second source for typotrons.

Youtz also discussed the change from P7 to P14 phosphor which is now being used on the production charactrons at MIT's request; it produces a visibly more intense image in the initial projection although the persistence is shorter; the color is also more favorable.

Youtz also described a study and development program to improve charactron service life with the hope of increasing it from below 5,000 hours to the order of magnitude of 10,000 hours. Although it is too early to know the service life we can expect production typotrons early laboratory typotrons have been life-tested out to 10,000 hours. Youtz pointed out that the typotron uses a single-purpose gun as opposed to the dual-purpose gun required in the charactron. A barium impregnated cathode, known as bariated nickel on which development was initiated by BTL and which is reportedly in pilot production in England, shows promise and is being followed in a high priority development program at Lincoln to improve charactron tube life.

6. Component and Circuit Specification Releases

Morris discussed the problem of reaching a workable agreement with IBM concerning Lincoln concurrence on component and circuit changes. Taylor said that in the past Best has maintained informal communication with IBM and has focused Lincoln attention on the right problems.

General discussion ended with agreement by Morris that he had sufficient information to work out a general IBM-Lincoln agreement on the subject to be confirmed by TIR. We will depend upon general sampling or spot checking rather than Lincoln control and approval of every small change. Everett pointed out that Lincoln should emphasize performance rather than attempt to control detailed design.

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Secretary