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Memorandum 6M-3672

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

SUBJECT: SAGE SYSTEM MEETING 6 JUNE 1955

To: Distribution List

From: J. J. Carson

Date: 8 June 1955

Approved:

B. E. Morriss
B. E. Morriss

- Agenda:
1. Status of Change Procedure
 2. Status of IBM Installed Equipment, Building F
 3. Building Review
 4. Status of Lighting
 5. Corning Glass Symposium
 6. Rand Permanent Facilities Site
 7. XD-1 Memory Improvement
 8. Meetings Scheduled this Week

1. Status of Change Procedure

N. H. Taylor stated that IBM considers the existing channel for obtaining Air Force approval of a change to XD-1 equipment inadequate and slow. At present such changes are processed through AFCRC (Lt. Col. LaMontagne) and RAFD (R. M. Paulson). IBM feels that an ECP should not be needed for changes to XD-1 but that Lincoln should take action on leading to a CCN. Lt. Col. LaMontagne is aware of the problem and has agreed to look into it. A meeting of all organizations concerned is needed to set up a rapid and effective procedure. Firm criteria should be established for the application of ECP's and CCN's. This problem might be clarified at the biweekly ADES meetings.

2. Status of IBM Installed Equipment, Building F

The problem areas have been display, drums, and high speed memory. Problems have been definitized and solutions initiated.

The addition of pre-amplifiers, modification of pluggable unit electronics, and application of ± 35 volt margins has been effective in reducing the high parity alarm rate in the high speed memories.

The effect of expansion on drums after they are adjusted and placed in operation has been determined. This data is being applied in adjusting head settings.

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Typotrons have been operated from the display system. Difficulties have been encountered in the procurement and operation of display consoles. There has been a shortage of trained manpower to handle the problem at IBM. The two situation display consoles delivered to date have required extensive modifications.

Necessary modifications are now being incorporated in consoles under production at Crosley. A schedule showing firm dates on which situation and auxiliary consoles must be delivered and installed at Lexington has been sent to IBM.

Difficulties with card machines have been due largely to the associated electronics and to operator difficulties.

Stemag resistors have proved unreliable and are being replaced.

The Central Computer and drum systems of the AN/FSQ-7 are scheduled for acceptance tests this month. Tests are underway and detailed records of operations are being maintained. However, IBM has been unable to ascertain the proper channels to obtain Air Force approval of acceptance tests. IBM has indicated a desire to obtain acceptance with a memory cycle time of 7.5 sec.

3. Building Review

W. H. Ayer reviewed the history of D.C. and C.C. building design explaining how and why Lincoln Laboratory had assumed a large part of the responsibility for the basic design work and subsequent changes once BTL was out of the picture. Two problem areas were outlined:

- a) The building design is not commensurate with the quality of electronic equipment. Further, it could be more compatible with the AN/FSQ-7 and provide for more flexibility.
- b) Lincoln Laboratory is performing tasks in connection with the building design that are the responsibility of WE-ADES.

W. H. Ayer proposed that a study group be formed to:

- a) Give those connected with the building design a background knowledge of the SAGE System;
- b) Consider the problems connected with the building design and redesign the building in the light of present experience.

Representatives of WE, IBM, Air Force, and Lincoln should take part. It is estimated that 4-6 months will be required.

B. E. Morriss pointed out that WE plans to redesign the building and that we would participate. This would probably require at least as much Lincoln effort as we plan to expend on the study group.

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4. Status of Lighting

Final agreement on lighting specifications utilizing blue light for operational areas is expected soon. In general, reaction to the use of blue light has been satisfactory.

The decision was made to modify all of Building F for indirect lighting.

5. Corning Glass Symposium

Representatives of Corning Glass Corp. will present a display-symposium on "Glass -- An Engineering Material" at Lincoln Laboratory on 14 June 1955.

6. Rand Permanent Facilities Site

Rand Corporation has requested central facilities for their programming and training activities. No AN/FSQ-7 will be available for such purposes according to present production and allocation plans. The Air Force has asked for an evaluation of plans to add one complete floor to the C.C. and fill in the space between the D.C. and C.C. at the Syracuse site. Direction Center Weapons Direction and Command Post facilities would be installed therein for the use of the Rand Corporation. L. Jeffrey of Group 61 is studying the feasibility of such a system.

Constructionwise, it seems plausible. From an operational point of view certain problems regarding scheduling of computer time and sharing of the environment arise.

It was suggested that it might prove more desirable to provide a complete FSQ-7 for the purposes of programming and training. This would probably result in less overall time being lost.

7. XD-1 Memory Improvement

Covered under 2. above.

8. Meetings Scheduled this Week

- a) The Lincoln-IBM concurrence meeting will be held at High Street, Poughkeepsie on 8 June.
- b) The Lincoln Laboratory Intercept Vectoring Seminar will be held in Cambridge on Tuesday, Wednesday, and Thursday, June 7, 8, 9.
- c) BOMARC coordination meeting will be held at Lincoln on Friday, 10 June.

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- d) Project High Production Coordination Meeting will be held at IBM Kingston Plant, on Friday 10 June.

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Production Coordination Office

JJC:mmc

Distribution List

Meeting Attendants

J. W. Forrester
R. R. Everett
H. E. Anderson
W. H. Ayer
S. H. Dodd
C. W. Farr
J. F. Jacobs
L. Jeffrey
K. E. McVicar
B. E. Morriss
J. A. O'Brien
T. R. Parkins
J. C. Proctor
E. S. Rich
N. H. Taylor
J. J. Carson

Others

J. A. Arnow
W. S. Attridge, Jr.
P. Bagley
D. R. Brown
S. Hibbard
D. R. Israel
H. J. Kirshner
E. D. Lundberg
B. B. Paine
R. L. Walquist
P. Youtz
C. R. Wieser
C. A. Zraket