

Memorandum 6M-3721

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SUBJECT: SAGE SYSTEM MEETING 27 JUNE 1955

To: Distribution List

From: E. D. Lundberg

Date: 27 June 1955

Approved: B. E. Morriss
B. E. Morriss

- Agenda:
1. Building Redesign
 2. Card Machines for XD-1
 3. ADES Monthly Status Meeting
 4. Console Layouts for AN/FSQ-7
 5. Results of Meeting with EADF
 6. Basic Circuit and Component Approvals
 7. Building F Lighting
 8. List of Items for ADES Project Office
 9. Meetings Scheduled this Week

1. Building Redesign

The purposes of the proposed study concerning building redesign were discussed by W. H. Ayer. He indicated that a committee has been formed as a result of a meeting at Western Electric - ADES on 15 June 1955. Objectives of the committee are to be discussed at the ADES - Lincoln Biweekly Meeting to be held at Lexington on Tuesday, 28 June. It was indicated that this redesign would not be applicable to the first few buildings because of time considerations. Two general objectives of the committee would be the following:

1. Design of a building that would be compatible in all respects with the electronic equipment and the operational requirements of the SAGE System at they are known to date.
2. Indoctrination of Western Electric - ADES personnel in the design philosophy and operational concepts of the SAGE System.

After considerable discussion, it was decided that in order to allow Western Electric to take complete responsibility in the building area as soon as possible, they should take the initiative in the proposed study and request reasonable assistance from us as required. It was indicated that in the future the requirements specifications for the buildings should be the responsibility of Western Electric, rather than Lincoln.

2. Card Machines for XD-1

Experience with XD-1 has indicated that the card machines connected to the computer, particularly the reader, are critical items which are essential to the operation of XD-1. In the event of a card machine breakdown, computer operations could be impaired for a considerable period of time. Therefore, there is a requirement to have spare machines available which can be substituted for machines undergoing repair. H. E. Anderson indicated that Lincoln and IBM have concurred on the requirement for a spare reader, punch, and printer for XD-1.

Concurrence has also been reached on a heavier IBM card which is .0009 inches thick instead of .0065 inches. These will be available and printed with our formats within one month. As equipment adjusted to handle one size cannot handle the other, it is desirable that the new card be used in all cases as soon as they are available. All card equipment (including that associated with MTC) should be adjusted to use the larger size.

3. ADES Monthly Status Meeting

A meeting will be held at 220 Church Street on Tuesday, 28 June, among representatives from the various organizations that are involved in the ADES Monthly Status Meetings, to discuss such items as the formats of reports and possible changes to the routine of the meetings. Lincoln will be represented by J. J. Carson. Jay W. Forrester stated that the meetings are tending to become too formal and, hence, are losing their effectiveness. One of the main purposes of the meetings should be to discuss difficulties experienced by the various SAGE organizations.

4. Console Layouts for AN/FSQ-7

H. E. Anderson discussed the results of the meeting Friday among Hazeltine, IBM, and Lincoln. This concerned the new console layout memoranda which supersede 6M-3330. IBM was not willing to agree on all of the proposed changes, but a list of differences was compiled which will serve as the basis of a discussion with IBM and Hazeltine on Thursday of this week. Another item to be discussed will be criteria for determining the kinds of future changes which may be made most easily.

5. Results of Meeting with EADF

H. J. Kirshner reported on the results of a meeting last week held with the C & E Staff of EADF at the Stewart Air Force Base. The principle problem discussed was that of communications entrance facilities to ADC bases in the Experimental Subsector. We have received a letter granting us permission to have the equipment installed at the bases, but facilities furnished must be separate and distinct from ADC facilities. A major question open at the present time is whether the paper work to be processed by the telephone company for each site will consume an undue amount of time and, hence, delay installation of equipment beyond the scheduled dates. The approved procedure will be tested shortly in regard to equipment that is to be installed at one site by 1 August of this year.

In regard to the question of whether we are placing orders for circuits required in the Experimental Subsector on time, it was indicated that the telephone company has a letter containing all of the telephone requirements for the Experimental Subsector, and are putting in facilities based on our maximum requirements. Specific orders are being placed prior to the dates by which required.

There are indications that we may have some difficulty in getting sufficient channels via scatter from Texas Tower No. 2. At the present time 15 channels are being provided and are for ADC use only. It is believed that the equipment has a capacity for 60 channels, but needs additional multiplexing equipment to utilize the full capacity. R.E. Rader is investigating this problem, including the question of whether sufficient multiplexing equipment has been ordered.

6. Basic Circuit and Component Approvals

A letter has been received from Crago (IBM) stating that IBM does not agree with the procedure of releasing approval of basic circuits and components for the AN/FSQ-7 by TIR. It is believed that this feeling is partially the result of a misunderstanding of the purpose of the TIR, which is not only used to disseminate information for general distribution, but is the only official means of indicating Lincoln approval of technical information. The general feeling expressed during the ensuing discussion was that we have indicated a certain degree of reliability in the computer which has not been proven. Hence, we should approve all basic circuits and components for the first production machine and changes thereto until we are satisfied that optimum performance has been achieved. No agreement was reached on the manner in which Lincoln approval would be released. It is felt that if TIR release antagonizes IBM, this approval might be indicated in letter form. However, this decision does not have to be made immediately, as the information on basic circuits for the AN/FSQ-7 is not in a form that could be released at the present time.

7. Building F Lighting

J. A. O'Brien discussed the current status of the lighting problem in Building F. Lighting experiments in Building B have been completed and the parts for the lighting system in Building F have been ordered. Tests during the past week have indicated that the light level has little affect on the legibility of the characters displayed on the charactron tube. However, Group 38 psychologists have indicated that the fatigue factor for the human operator is considerably higher while viewing the scope in either total darkness or with a high light level, but apparently no data has been accumulated on this, nor has data been accumulated regarding the length of time that an operator can view the scope without impairing his efficiency. Group 38 is to be requested to conduct a study including the necessary experimentation to determine what the fatigue factor is.

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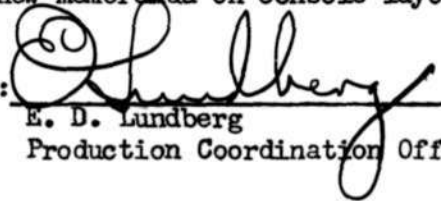
8. List of Items for ADES Project Office

S. H. Dodd is accumulating a list of various SAGE System items that do not appear to be under control as far as schedules, responsibility, etc. are concerned. Any items of this nature should be submitted to him as soon as possible. Mr. Forrester indicated that it would be desirable if this list were compiled and transmitted to the Project Office prior to the next ADES Monthly Status Meeting so that the items on the list could be discussed at that meeting.

9. Meetings Scheduled this Week

- a) The ADES Biweekly Meeting will be held at Lincoln on Tuesday, 28 June. The principle item for discussion will be the building redesign.
- b) The regular IBM - Lincoln concurrence meeting will be held at Lincoln on Wednesday, 29 June.
- c) A meeting will be held with IBM and Hazeltine at Lincoln on Thursday, 30 June, to discuss the new memoranda on console layouts.

Signed:


E. D. Lundberg
Production Coordination Office

EDL/rb

Distribution List:

Meeting Attendants

J.W. Forrester
R.R. Everett
H.E. Anderson
J.A. Arnew
W.H. Ayer
J.J. Carson
S.H. Dodd
C.W. Farr
J. F. Jacobs
H.J. Kirshner
E.D. Lundberg (2)
K.E. McVitar
B.E. Morris
J.A. O'Brien
B.B. Paine
T.R. Parkins
E.S. Rich
N.H. Taylor
C.R. Wieser

Others

D. R. Brown
S. Hibbard
D. R. Israel
J. C. Proctor
R. L. Walquist
P. Yantz
C. A. Zerket