

Memorandum 6M-3832

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SUBJECT: SAGE SYSTEM MEETING 15 AUGUST 1955
To: Distribution List
From: J. J. Carson
Date: 15 August 1955
Approved: *B. E. Merriss*
B. E. Merriss

- Agenda:
1. Fatigue Tests at Consoles
 2. FST-2 Schedules
 3. Index Registers for XD-1
 4. Display System Status
 5. XD-1 Contract for the Coming Year
 6. Auxiliary Drums for XD-1
 7. External Environment of XD-1
 8. Meetings Scheduled This Week

1. Fatigue Tests at Consoles

The Air Force through the ADES JPO have expressed an interest in measuring the fatigue of console operators in SAGE System Direction and Combat Centers. B. E. Merriss requested action from Group 61. No work has been done at Lincoln towards measuring this factor.

S. H. Dodd briefly discussed the opinion of Dr. Frick on this subject. There has been a history of inadequacy of such tests. It is difficult to achieve testing conditions which are analogous to operational conditions, thus making correlation of results difficult. It is therefore felt that such tests may have little meaning.

While such tests may not produce worthwhile results, it was indicated that this factor may be extremely important at the time SAGE becomes operational. In any event, the Air Force must have some criteria on which to base its manpower and duty period planning.

J. A. O'Brien stated that it has proved difficult to get airmen who are good subjects for such an investigation because of the pre-conditioned attitude of these men.

Since it seems desirable to get a good answer if possible, efforts will be made to determine action in this direction. R. R. Everett will discuss this with Dr. Frick.

2. FST-2 Schedules

H. E. Anderson briefly discussed the placement of initial Burroughs'

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service test models of FST-2. He stated that it had been decided that the first two service test models would be placed at South Truro and Bath, respectively, in order to have an operational experimental subsector containing two heavy radars by 1 April 1956. Division 2 has requested information on whether the third service test model FST-2 should be placed at Texas Tower #2 or at Montauk. Division 6 had previously requested that it be placed on Texas Tower #2.

The question of whether an experimental subsector, consisting of heavy radars at South Truro and Bath, would be typical of a SAGE subsector was considered. R. R. Everett felt that it might be better to place the first service test model FST-2 at Montauk in order to determine the adequacy of the ADC radar at that site. S. H. Dodd proposed that the question of proving the adequacy of the ADC radars might be balanced against the importance of proving that the system is workable. J. A. O'Brien stated that there is a better chance of having a working system by initially using the Bath site.

On the problem of Montauk versus Texas Tower #2 for the third service test model FST-2, J. F. Jacobs stated that there would be more room for operational tests over an ocean area than there would be over a land area and for this reason it might be desirable to place the third FST-2 on Texas Tower #2. It was further stated that use of Texas Tower #2 would produce a triangular pattern providing overlap. It was decided that the entire problem of allocation of the service tests models of AN/FST-2's should be studied and that Anderson would consult with R. R. Everett, Group 61, and C. R. Wieser.

3. Index Registers for XD-1

J. A. O'Brien inquired as to the status of the two additional index registers for XD-1. He stated that the IBM people here at Lexington had made all necessary plans for inclusion of this additional equipment. However, they have been specifically ordered not to make any equipment changes to date.

The dates which IBM had announced at the ADES Status Meeting were discussed. IBM stated they would deliver the registers on 31 October 1955 and have them operational by 15 November 1955.

It was decided that S. H. Dodd would prepare a letter for Jay W. Forrester's signature, indicating the importance of obtaining the additional index registers for XD-1 on schedule (operational by 1 October) and recommending that the index registers from the XD-2 machine be provided for this purpose. This letter will then be transmitted to Crago of IBM.

5. Display System Status

B. E. Morriss briefly reported on the meeting held at WE-ADES on 12 August to discuss changes to the XD-1 display system and to set up a procedure for obtaining contractual coverage for these changes. He stated that IBM indicated that the XD-1 display system could not be completed according to the latest specifications released by Lincoln Labor-

atory (6M-3583 through 6M-3587 AN/FSQ-7 XD-1 Console Equipment and Label Layout) until the end of March 1956. IBM was not able to define the original work required for the display system and, further, has no go ahead to do any work on incorporating the latest changes.

It was indicated that IBM has done no ordering for fifteen push button switches for either XD-1 or the production system.

IBM expects to be able to provide schedules within two weeks to indicate when the display system for XD-1 can be completed. It is expected that these schedules will show a completion date considerably later than 1 January 1956.

Agreement was reached at the New York meeting as to what has been completed to date on the display system and what additional work remains to be done.

Jay W. Ferrester indicated that it would be desirable for the ADES organization to place a man full time on this problem to find out why the schedule dates cannot be met and what can be done about expediting the completion of the XD-1 display system. He proposed discussions with Dr. Holloway and Mr. Schwartz of ADES to this end.

5. XD-1 Contract for the Coming Year

B. E. Morriss stated that some discussion, as to the next XD-1 contract with IBM, was held at the New York meeting last Friday. The best solution which was discussed was an extension of the present contract with provisions for maintenance and reliability work. The Air Force stated that all changes to XD-1 would have to go through the ECP procedure. It was proposed by the Air Force that a procedure could be arranged such that an ECP could be approved within a few days. To implement such action the Air Force would provide personnel at Lincoln Laboratory who would have the authority to approve ECP's. The fact that the Air Force requires cost estimates before approval can be given to an ECP may delay such action since only the accounting department of IBM can provide cost estimates.

6. Auxiliary Drums for XD-1

B. E. Morriss stated that this matter has been discussed at the New York meeting and that no firm delivery date was stated by IBM. IBM indicated that although they are capable of approaching the 1 February delivery date, they were not contractually bound to deliver this equipment until the end of April 1956. It was decided that a letter on this matter should be prepared by S. H. Dodd.

7. External Environment of XD-1

H. J. Kirshner posed a question of who has the responsibility for liaison with agencies who will provide information for the XD-1 Direction Center. Air Force sites and the CAA are included in this category. Arrangements must be made to indicate Lincoln's needs to such agencies

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and arrange for use of needed facilities.

It was stated that C. R. Wieser is organizing a group to perform these tasks. H. J. Kirshner will write a note to Jay W. Ferrester indicating present needs in this direction.

8. Meetings Scheduled This Week

The weekly IBM-Lincoln concurrence meeting will be held on Thursday, 18 August, at IBM Kingston Plant.

SIGNED:

J. J. Carson
J. J. Carson

Production Coordination Office

JJC:mmc

Distribution:

Meeting Attendants

J. W. Ferrester
R. R. Everett
H. E. Anderson
R. J. Buzzard
J. J. Carson
S. H. Dodd
J. F. Jacobs
H. J. Kirshner
K. E. McVicar
B. E. Morriss
J. A. O'Brien
T. R. Parkins
W. Papiian
J. C. Prector
E. S. Rich
J. A. Russell

Others

J. A. Arnow
W. H. Ayer
H. D. Benington
D. R. Brown
R. S. Fallows
C. W. Farr
S. Hibbard
D. R. Israel
E. D. Lundberg
B. B. Paine
N. H. Tayler
C. R. Wieser
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