

Memorandum 6M-3513

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

SUBJECT: MINUTES OF IBM - MIT CONCURRENCE MEETING NO. 23, 7-8 APRIL 1955

To: S. H. Dodd

From: J. Giordano and R. P. Mayer

Date: 11 April 1955

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

Present:	<u>IBM</u>	<u>MIT</u>
	B. Housman	J. Giordano
	R. W. Lowrie	N. T. Jones
	R. C. Marden	R. P. Mayer
	D. C. Ross	B. E. Morriss
	C. E. Walston	

Only two documents were discussed 7 April. They were IM-102-2, Equipment List for AN/FSQ-7 Direction Center, and D-65-3, P-127-1, Specification - AN/FSQ-7 Auxiliary Console for XD-1, XD-2, and the Production Machine.

Document IM-102-2 (Equipment List) received concurrence except for numerous changes which are listed in the concurrence letter and except for Appendices I through IV which are still in the process of being prepared. Because a more complete concurrence is expected soon, the present limited concurrence will receive only limited distribution. The following is a discussion of points raised during the discussion and of the more important changes which were made:

1. It should be understood that concurrence does not imply anything about delivery dates.
2. The specifications should indicate more clearly the fact that rental equipment is not bought as part of AN/FSQ-7.
3. The XD-1 tape power supply unit (formerly #20) will be given a different unit number so that the XD-1 and production machines will both agree on #20 as the designation of the auxiliary drum unit.
4. The number of 026 key punches should be increased from two

- to five in III.B. and in Appendix VII.
5. The number of maintenance test probes is assumed to be included in the Maintenance Console Specifications.
 6. Section IV.2 should indicate delivery of three output sections with provision for expansion to eight.
 7. Appendix V should indicate that display consoles used with cameras or other special devices might use charactron tubes with phosphors and/or screen diameters different from those on manned consoles.
 8. A "set of projection equipment" includes such things as a camera, developing (or other processing) equipment, chemicals (and/or other expendables), and a projector. It was felt unnecessary to mention this in the equipment list.
 9. Appendix IV will include a summary of four categories of labels.
 10. Appendix VI should also list the intercom system.
 11. Console nomenclature is undergoing revision, and the equipment list should eventually be corrected.
 12. Some list should be prepared showing expendable items and all other items that people can think of, even though it is not clear where they should eventually be listed. This list might include such things as test equipment, tape reels, IBM cards, etc.

Document D-65-3, P-127-1 (Auxiliary Consoles) received concurrence except for numerous changes which are listed in the concurrence letter. The following is a discussion of points raised during the discussion and of the more important changes which were made:

1. It was pointed out that nomenclature has often been misused and that correct nomenclature calls for "duplex" and "simplex" to be used only in connection with parts of FSQ-7; while "production" and "prototype" should be used to distinguish XD-1 from later units.
2. Figure 2 should be changed to show a console without DD.
3. A new section (3.2.4) was added to provide for eventual flexibility in the location and quantities of activate and release switches.
4. Reference to d-c power indicator lights should apply to prototypes only.

5. The console widths expressed in modular units will be part of the specifications.

Second day of Concurrence Meeting No. 23 held at Lincoln Lab, 8 April 1955.

The second day of the meeting began with a review of the arithmetic compare proposal. It was decided an IBM - SO letter will be written rejecting the arithmetic compare for both prototype and production machines.

Concurrence was accorded to PERSELBSN Codes, D-16-4, with two small revisions.

The Operate Unit, PER (75)8, lock address proposal, D-19-3, was concurred in tact for the production machine. The prototype proposal was previously concurred on.

The proposed change to Drum System, D-13-3, was concurred on in tact for the production machine.

Proposal for Addition of Two Index Registers for XD-1 and XD-2 (P-170) received concurrence on the adequacy of the specification.

Proposal on Change for the Clock Register in XD-1 and XD-2 (P-171) was concurred in tact.

Proposal for Use of Illegal Instructions for XD-1 was considered as to present cost versus operational functional efficiency. The present costs were:

1. Change in programming manuals, instruction control, and arithmetic element manuals.
2. Increased burden on maintenance and diagnostic programming.
3. Drafting time, traffic charts, data book.

As a result, unless a good justification can be made, the use of illegal instruction should be discouraged, and because of present costs the proposal shall be rejected.

Proposal for the Simplex Maintenance Console, D-46-2, was concurred in tact for the production machine.

Changes in the LRI for XD-1, letter to R. Cypser from R. C. Marden dated 24 March 1955, received concurrence.

Request (C.E.R. 13) for a change to parity rate alarms for XD-1 will be considered by the IBM group for a future proposal.

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Proposal for Display Consoles Side Frame Specification, D-75-1 and P-156-1, for both XD-1, XD-2, and Production Machine, received verbal concurrence in lieu of the rewritten document receiving written concurrence at the next meeting.

-DDR-DDT problem - An IBM - SO letter, 1) stating all the interpretations of the Bell Tel. document on DDR and DDTS and 2) stating the extent of IBM design in this direction, was reviewed and will be forwarded to Bell Telephone for their comments.

Proposal for Deletion of Preset Status from XD-1 and XD-2 Marginal Checking Controls (P-178) was concurred with revisions.

The following Power Specifications for XD-1 and XD-2 were concurred with revisions:

1. Specification for Output, Crosstell, LRI, MCD for XD-1 and XD-2 (P-120).
2. Specification for the Display Console, CB Frame for XD-1 and XD-2 (P-121).
3. Specification for Display MI-WL MCD Frame, XD-1 and XD-2 (P-122).
4. Specification for Central Computer MCD Frame for XD-1 and XD-2 (P-117).

Proposed agenda for next concurrence meeting to be held on 14 April 1955:

1. Revised Production System Equipment List;
2. Pattern Generator;
3. Command Post DID desk and Projection Display.

Signed: _____

J. Giordano
J. Giordano

Signed: _____

R. P. Mayer
R. P. Mayer

JG, RPM:FJE

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