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Memorandum M-2730

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By: R. R. EVERETT
Date: 2-1-60

Division 6 - Lincoln Laboratory
Massachusetts Institute of Technology
Cambridge 39, Massachusetts

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SUBJECT: PROGRESS REPORT FOR AN/FSQ-7 - 12 March 1954
To: J. W. Forrester, R. R. Everett, Division 6 Group Leaders
From: P. J. Gray

1. Memory

MIT has tested approximately 110,000 cores for the XD-1 memory. Of these approximately 70% were considered acceptable. All have been returned to IBM where the balance of cores required for one bank of memory for XD-1 have been procured and tested. IBM is in the process of ordering cores for the second bank of memories for XD-1 from General Ceramics who remain the only production supplier for this item.

Capacity for the core testing facilities at IBM is such that not much if any additional core testing for the prototypes will be done at MIT.

2. Power

Amplidynes for marginal checking system have been received by IBM and are being held for later installation. MG sets and related switch gear are being installed at IBM, Plant 2, for use at XD-2. DC supplies have been undergoing tests by the manufacturer (General Electric Company). Performance of this equipment is expected to be well within our specifications. Shipment is expected within the next 2 weeks on the units for XD-2.

3. Display

At a recent meeting in Poughkeepsie, IBM agreed to proceed immediately with placement of a purchase contract on Convair for approximately 120 nineteen-inch Charactron tubes, which will be required for the prototypes. In the interest of developing an alternate source of supply for subsequent production requirements, IBM will continue their investigation of other suppliers.

A joint meeting regarding design specifications for the area discriminator unit led to the conclusion that this would be a standard type situation display console. There will be 2 in each FSQ-7 central; one for automatic initiation purposes and the other for handover.

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The engineering work to be done at MIT for the development of the display generation and display selection frames will be done by the display section with the assistance of 6 additional engineers. IBM will procure parts and the material and will assemble the display frames per the design developed at MIT for outputs.

4. Outputs

Group 24 is engaging in circuit development for the modulator and demodulator for output data transmission. Group 62 will do the packaging design for this equipment. Since IBM prefers not to construct this material it may have to be built or subcontracted by Lincoln.

5. Inputs

The model radar mapper developed by IBM has been tested with WWI and returned to IBM. The tests revealed that in general the unit operated satisfactorily. Certain suggested modifications arising from these tests are currently being investigated.

6. Installation

Arrangements are being completed to define the areas of responsibility of installation of XD-1 which will be directed by S. H. Dodd.

MIT will be responsible for engineering all aspects of design and installation of power transformers, MG sets, power control, and distribution frame. IBM will do engineering beyond this frame to MDC frames and equipment frames.

Activities of Francis Associates on equipment cooling, lighting and cable fixtures for XD-1 will be directed by MIT. Dodd will be the point of contact on these items.

The Air Force has approved the XD-1 building design.

Ed Quick of IBM will maintain contact with the XD-1 installation and will direct installation activity at Plant 2 test areas and the final XD-2 installation location.

7. Duplex Central Planning

A group has been set up under Dodd at MIT to study the problems of the duplex central. This group will work with a similar group at IBM under D. C. Ross. An attempt will be made in the next few weeks to define those areas which need future decisions.

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8. Approval and Concurrence

Lincoln approvals have been provided for the following:

- A. Test memory.
- B. Marginal checking for central machine.
- C. Program element specifications.
- D. Video mapper specifications.
- E. Revision of layout for basement of XD-1 building.
- F. Drum system specifications.

EDO-SO concurrence has been reached on specifications for the maintenance console, power supply system, area discrimination unit, output frame, and warning light system.

Signed 
P. J. Gray

Approved 
A. P. Kromer

PJG:smo

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