

Memorandum M-2879

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Date: 2-15-60

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

SUBJECT: SUMMARY OF IBM - MIT COLLABORATION ON DESIGN OF AN/FSQ-7 (XD-1)
COMBAT INFORMATION CENTRAL, MAY 1 THRU MAY 31, 1954

To: J. W. Forrester, R. R. Everett, J. C. Proctor, C. R. Wieser,
N. H. Taylor, D. R. Brown, S. H. Dodd, P. Youtz

From: A. P. Kromer

Date: June 24, 1954

Abstract: Joint engineering activity has resulted in engineering concurrence and Lincoln approval of additional portions of the system. Completion of the review of the display system has resulted in agreement on certain changes to reduce tube count. Changes in design specifications for the display system will be concurred upon. Planning for the duplex central is proceeding.

Engineering Visits

During the period approximately 54 man days were spent at Poughkeepsie by MIT personnel. This is in addition to the full time of 5 men resident at Poughkeepsie. Also during the month approximately 50 man days were spent at Cambridge by IBM personnel. This is in addition to the 3 resident IBM men.

Use of the IBM airplane for transportation between Cambridge and Poughkeepsie has continued. During May three of the eight days on which the plane was scheduled to fly all flights were cancelled because of inclement weather. On several occasions, because of the large number of people traveling between these locations, additional plane service was provided by chartering planes locally.

Exchange of Publications

During this period we forwarded to IBM 15 M Notes and other miscellaneous memoranda and drawings.

We have received from IBM six "H-Notes", five "IM" Reports and one correction, two "TR" Reports, four Electrical Lab Reports, and two Project High Biweekly Reports and one Central Reference Room Bulletin.

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General Comments

Continued work of the two engineering groups has led to formal Lincoln approval for (a) inclusion of provisions to accommodate miscellaneous radar input in AN/FSQ-7 and (b) several additional basic circuits. Further, engineering concurrence has been reached regarding the design specifications for the arithmetic element and the output systems switch.

Further details regarding engineering activity are reported in Division 6 Memorandum M-2831 issued during the month.

Study of the logic of the centralized display system led to the conclusion that centralization of the source of driving voltages for character selection lines for the system would result in the saving of approximately 3000 vacuum tubes. It has been decided to incorporate this feature into the display systems. This and other modifications to the display system which have been determined as detailed engineering work proceeded will be reviewed at a joint discussion covering a revision of the display system design specifications in June. A revised specification will be issued to replace M-2606.

Construction of hardware for the XD-1 System is continuing at the IBM plant. The instruction control frame has been completely wired and assembled and was placed on test. Assembly work is proceeding on the program element and arithmetic element frames. Work is also being carried forward on the memory array planes and on the power supply distribution frames.

The first draft of a proposal for the Duplex Central was issued by the Joint IBM - MIT planning group (IM-91). Comments regarding this proposal will be secured from interested parties engaged in the project and a revised proposal is expected to be issued approximately July 1.

Additional discussions were held with IBM concerning some of the general planning aspects and personnel requirements for installation and maintenance of XD-1 at Lexington, provision of equipment for the Air Division Combat Center, and power requirements for the system.

Signed


A. P. Krumer

Approved


N. H. Taylor

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