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Memorandum M-2374

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

SUBJECT: SUMMARY OF MIT--IBM COLLABORATION, July 1 thru July 31, 1953

TO: J. W. Forrester, R. R. Everett, J. C. Proctor, C. R. Wieser,
N. H. Taylor, D. R. Brown, S. H. Doid, F. South

FROM: A. P. Kromer

DATE: August 26, 1953

ABSTRACT: Engineering collaboration with IBM has continued during this period. Study of all phases of the logical and physical design of equipment is proceeding.

Engineering Visits

IBM people working on the project spent approximately 106 mandays at Lincoln Laboratory, Cambridge, while MIT personnel spent a total of 88 mandays at IBM's High Street Laboratory at Poughkeepsie. The number of full time IBM men stationed at Cambridge has been reduced from four to two. The men previously assigned here to work in connection with magnetic cores have now returned to the High Street location to continue the development work there.

Exchange of Publications

During this period we have forwarded to IBM 22 E-Notes, 52 M-Notes, 1 R-Report, 2 Project Whirlwind Summary Reports, 6 copies Memorandum L-113, and miscellaneous drawings.

We have received from IBM 10 IM series reports, 5 of the new H series reports, various trip reports and Project High Biweekly Reports.

General Comments

The design work for the arithmetic element being done by IBM has led to the construction of a 5 digit prototype unit at their laboratory. While construction was essentially complete, the unit was not operating as of the end of the month. Physical design, drafting and layout work for the structure of the racks, bays and plug-in units for the prototype models is also proceeding.

The standardization committee activity is going forward. As of the end of this month, a total of eight Component Application Memoranda have been issued covering resistors, capacitors, tube sockets and inductors.

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General Comments (Continued)

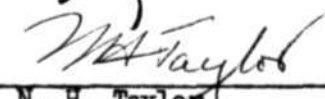
These will serve as a basis for the preparation of procurement specifications by IBM and the actual issuance of purchase orders for the material to be used in the construction of the two prototype units. The initial information concerning the standardized vacuum tube types was also released during this period. The tube types approved for general use throughout the computer are SR-1782 (7AK7), Z-2177 (5965), 5998, GL-5727 (2D21). In addition to the above four types, the 4X150A and the 6293 (6146) type tubes are suggested. Work on materials, processes and drafting is underway also.

Joint meetings (Project Grind) were continued during this period. A total of four full days were devoted to this work. Discussions are covered in Memoranda M-2283, M-2284, M-2285 and M-2359. These meetings were devoted to discussion of the output display system, manual input buffer drum, crossteling, output drums, digital information display, maintenance console, mechanical design, basic circuits, etc. It is planned to review problems of this type from time to time during the future at similar Project Grind sessions.

Visits were made to both Air Material Command (AMC) at Rome, N.Y., and AFCRC to review with these Air Force Groups latest information IBM has developed in connection with the costs for the remainder of the program covering the development, design and construction of the two prototype models. This work is in preparation for the contract which they expect to receive from AMC as of September 1.

The number of IBM persons of staff level assigned to the project as of the end of the period was 144, with an additional 85 administrative and non-professional persons.

Signed: 
A. P. Kromer

Approved: 
N. H. Taylor

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