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Memorandum M-1891

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Digital Computer Laboratory
Massachusetts Institute of Technology
Cambridge 39, Massachusetts

CLASSIFICATION CHANGED TO:
Auth: DD 254
By: J. R. Everett
Date: 2-1-60

SUBJECT: SUMMARY OF IBM - MIT COLLABORATION
February 1, 1953 to February 28, 1953 inclusive

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

From: A. P. Kromer

Date: March 9, 1953

Abstract: In the fourth month of the period covered by the Subcontract between MIT and IBM the collaboration has expanded in some fields to discuss specific items related to the development of Whirlwind II.

Engineering Visits

IBM people working on this project spent 55 man days at the MIT Laboratory in Cambridge. In addition, joint visits of IBM and MIT personnel were made to Camp Evans Signal Laboratory in connection with display tube development work, to Navy Materiel Testing Laboratory and Sprague Electric Company in connection with component standardization. During this interval, MIT personnel spent 4 man days at IBM's Poughkeepsie Laboratory.

Exchange of Publications

During the period we have forwarded to IBM: 24 M-Memos, 3 E-Notes, 1 A-Memo, 1 R-Report, 6 copies VI - L-84, and miscellaneous drawings and standards sheets.

We have received from IBM one set (Volumes 1, 2 & 3) of the Systems Diagrams for the IBM Type 701 Machine, and 3 reports covering ring circuits, card machine control circuits, and a decoding switch.

The formal report covering the first three month's work under the Subcontract was issued by IBM as required by the contract. A second formal report is to be issued upon completion of the Subcontract at the end of April.

General Comments

Logical design work for the arithmetic element has continued with numerous alternate proposals being evaluated to determine the amount of equipment required in relation to the performance of each of the several plans. It is expected that early in March a selection of the most suitable scheme will be made, and detailed work on circuits and design will start.

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General Comments (Continued)

Considerable attention has been given to displays that will be required for the Whirlwind II system. Work on this field is progressing slowly because of the large number of unknown factors. Possible application of the new type cathode ray display tube seen at Camp Evans Signal Laboratory is being evaluated. Further investigation regarding this tube from the standpoint of manufacture and delivery from Dumont will be made in connection with this study.

Several discussions were held during the month regarding component standardization and improved operational reliability. These discussions were with military laboratories and component manufacturers.

Work in connection with the design of a standard pluggable-unit chassis has been started, as well as consideration of a packaging design for the magnetic memory.

Considerable time during the month was spent in connection with the general organization and planning of the engineering work necessary for the development of the Whirlwind II computer and the associated equipment. Detailed lists of items were prepared, and programs showing the time in which the work required for each of these is to be done are in the process of being prepared. This information will be collected at a centralized location, and control will be established so that the pace of the program can be carefully followed and attention given to any phase of it which seems to be losing ground. Through this means we hope to successfully complete the development work and construction of the prototype models in line with the extremely tight schedules that have been set as targets for this work.

The number of IBM persons of staff level assigned to the project as of the end of this month was approximately 40.

Signed: _____

AP Kromer
Arthur P. Kromer

Approved: _____

N Taylor
Norman H. Taylor

APK/mmt
CC: J. M. West

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