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Memorandum M-1739

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Digital Computer Laboratory
Massachusetts Institute of Technology
Cambridge 39, Massachusetts

SUBJECT: SUMMARY OF IBM - MIT COLLABORATION
October 27, 1952 to November 30, 1952 inclusive

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

From: A. P. Kromer

Date: December 3, 1952

Abstract: In the initial month following issuance of letter of intent considerable interchange of engineering information between IBM and MIT has taken place. Discussions held upon occasion of visits by representatives of each organization to the laboratory of the other have covered engineering aspects of Digital Computers and Air Defense System operation.

During the first month we have been working on the basis of a Letter of Intent (Purchase Order #DIC-L 33210) which was issued October 27, 1952.

Engineering Visits

In this interval IBM has assigned fourteen people full time on this project. This group has spent a total of 110 man days at the Digital Computer Laboratory and MIT personnel have spent 16 man days at IBM, Poughkeepsie. (Prior to the issuance of the Letter of Intent there had also been some visits to each laboratory location). In addition to the time spent at Cambridge and Poughkeepsie, an extensive field visit was made to General Electric tube plant, Owensboro, Kentucky; RCA tube plant, Harrison, New Jersey; RCA Ferrite plant, Camden, New Jersey; and Sylvania tube plant, Emporium, Pennsylvania. IBM participated in this trip to the extent of 23 man days and MIT to the extent of 27 man days.

Exchange of Publications

In order to provide the maximum possible background information as well as records of current activities, a considerable number of items published by the Digital Computer Laboratory have been forwarded to IBM, Poughkeepsie. To date this material comprises: 30 E-notes; 60 M-Memos; 10 R-Reports and miscellaneous other data such as Quarterly Reports, Digital Computer Laboratory Standards Book, Thesis Reports, and miscellaneous drawings.

Since IBM has spent the initial period selecting personnel and organizing their activities there has been no material published by them to date. We have received, however, some miscellaneous drawings concerning portions of the 701 computer for study by MIT people.

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

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General Comment

Discussion has taken place both at MIT and IBM covering Whirlwind I and the 701 Computer characteristics and performance. These discussions have included Logic, Programs, Basic Circuits, Internal Storage, Arithmetic Element, and In-Out equipment; (i.e., drums, tape units, scopes, etc.). Discussions have also been held covering magnetic memory and MTC Computer. Application of IBM punched card equipment for use with MTC has been investigated in detail and a decision reached to provide this type of In-Out facility for MTC. The general subject of standardization of components and circuits has also been the subject of some of the discussions. Application of components such as diodes, cores, vacuum tubes, transistors, etc. have been discussed at considerable length.


A large portion of the time spent at MIT has been devoted to acquainting the IBM personnel with the overall problem and developments, to date, regarding the use of a digital computer for data processing in an Air Defense System. This work, in addition to lectures and conference discussions, has included demonstration of interceptions; visits to Lincoln Laboratories at Lexington; the Bedford Airport MEW site, and the N. Truro Field Station.

Also during this initial interval negotiations took place which resulted in agreement concerning the formal subcontract which will cover the work done by IBM during the six months of November, 1952 through April, 1953. Complete agreement has been reached by IBM and MIT regarding the terms and conditions of the contract. Tentative approval of the Air Force Contracting Agency has also been received. As of the end of November we were waiting for final Air Force approval, however.

Signed:


Arthur P. Kromer

Approved:


Norman H. Taylor

APK/aik

cc: J. W. West

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