SUBJECT: DISCUSSION WITH IBM REGARDING ESTIMATE OF COST FOR INITIAL SECTOR, LINCOLN TRANSITION AIR DEFENSE SYSTEM

To: J. W. Forrester
From: A. P. Kromer
Date: March 30, 1953

On Thursday, March 12, at the IBM High Street Laboratory, Mr. N. H. Taylor and myself met with the following representatives of the IBM Corporation to discuss their estimate of the cost of manufacture of equipment for an initial sector of the Transition System:

- D. B. Miller (IBM Dept. 806)
- H. F. Boodecker (806)
- E. H. Caffrey (584)
- F. S. Putnam (806)
- J. G. Hoffler (806)
- N. L. Warren (587)
- H. J. Whalen (199)
- J. H. Fraser (805)
- J. E. Zollinger (IBM World Headquarters)
- G. R. Solomon (IBM World Headquarters)
- T. A. Burke (High Street Laboratory)
- M. M. Astrahan (Part-time) (High Street Laboratory)

The discussion also covered IBM's estimated delivery interval as well as the cost of setting up and equipping a plant in which the manufacturing would be carried out.

IBM manufacturing division representatives used the TM-20 Report as their basic source of information, supplemented by additional data obtained in discussion with Project High engineering representatives. Based on this, they drew certain conclusions regarding the man-hours of labor and cost of the equipment as compared to the IBM 701 Machine, and most of the figures they presented were therefore extrapolations of the 701 Machine costs based on the ratio of complexity and amount of equipment involved in the two systems.
None of the figures that were discussed had been cleared through IBM organizational channels; therefore, they were not released for discussion outside the meeting. In general, however, their estimate of the shop manufacturing cost (no G&A, profit or fee included) for the equipment was in close agreement with the figures contained in Memorandum L-88. However, IBM’s estimate of the cost of setting up and equipping a plant was much larger than those included in L-88.

Also, the IBM estimates did not include all aspects of costs associated with the project, but was limited only to a plant, the manufacture and installation of electronic equipment for the computer center, and the data input and output systems.

Cost of acquisition of telephone and teletype equipment, stand-by power generating equipment, furniture and fixtures, commercial power substation, construction of an operations control building and other buildings at the computer center site were not included in the IBM figures.

It was pointed out to IBM that, based on our discussion with Air Force people, we felt it would be highly desirable for them to be in position to discuss estimates that could be compared directly with those in L-88, for the Air Force people at times feel it represents lack of coordination between MIT and IBM when different sets of figures are not based on the same scope of work. Further, the Air Force had commented that, in their opinion, L-88 did not go far enough in gathering together all the costs associated with setting up a Lincoln Air Defense System, and thus tended to be somewhat misleading to Air Force people. In view of this, we felt that the IBM estimate which omitted many of the things included in L-88 is a step in the wrong direction insofar as Air Force desire to obtain a complete picture.

IBM agreed to give further consideration to the matter, to review the cost estimates again, particularly manufacturing plant cost, and to study the time schedule to determine what could be done in the interest of reducing the interval between the time of receipt of a contract and delivery of the first 4 systems. The delivery interval discussed during the meeting on March 12 was approximately 27 months after the scheduled completion date of 7/1/64 for Prototype Model No. 1.

Subsequent to this meeting, Mr. G. R. Solomon advised that the entire estimate had been reviewed carefully, and considerable reduction was made in the amount of manufacturing plant space contemplated in the first estimate and also the delivery interval for the first production equipment would be approximately 15-16 months after the completion of Prototype Model No. 1 (scheduled for 7/1/64).