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4 September 1952

MEMORANDUM FOR THE CHIEF OF STAFF

SUBJECT: Report by the Inspector to the Director on Analytical Machine Employment, dated 15 August 1952.

1. With respect to the recommendations contained in subject report, I offer the following comments:
 - a. I do not concur with the recommendation of paragraph 7a that the planning and scheduling of analytic equipment be placed directly under the Technical Director of the Office of Operations. Although a re-examination of organizational structure of the Machine Division is appropriate, I believe that the Technical Director of the Office of Operations should not be burdened with this specific operational responsibility, nor do I believe that this responsibility should be withdrawn from the Machine Division. I believe that this Division might be appropriately re-organized into three branches: one responsible for computer type equipment, a second responsible for all other electronic analytic equipments, and the third responsible for IBM and relay equipments. (In the case of certain equipments allocation of responsibility will necessarily have to be made arbitrarily). Each Branch should have assigned to it the programmers, operators and maintenance personnel necessary to keep the equipment for which it is responsible operating at maximum effectiveness. I agree with the Inspector that there is a need for a group having responsibility for scheduling machine jobs. This group should additionally be responsible for preparing an overall Machines Program for the Office of Operations, indicating the type and number of machines currently needed, and the type and number of machines which will be required and for which planning should go forward. This group should also be responsible for maintaining a continuing survey of equipment available and equipment required. It is my belief that such a group belongs in the Office of Machines Division as a Staff Group. Organization of a Machines Division as described above should facilitate the transition from the development to the operational stage in the case of new equipments, since the individuals who will ultimately be responsible for the programming, operation

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- a. and maintenance of such equipments would be those to whom they are turned over.
- b. The principle of decentralized machine installations is concurred in with certain reservations. Computer type equipment certainly does not lend itself to decentralized operation. It is doubtful whether electronic analytic equipment can be decentralized as a practical matter. However, it is certainly desirable that, within reason, the various operating components of the Office of Operations be provided with small desk-size analytic equipments for sampling and other smaller investigations. Also some provision should be made whereby operating Divisions, Branches, Sections, etc., have access to certain IBM equipment for general small scale investigative purposes. Large scale jobs will certainly require the services of a centralized machine-operating organization.
- c. Continually improving the quality of machine operators is considered essential to the improvement of analytic equipment effectiveness. In this field there is no question that the operational usefulness and efficiency of the equipment can be no better than the quality of the programmer, maintenance personnel, and operators assigned the responsibility for operating the equipment. The nature of the equipments being developed and the complexity of the jobs these equipments must perform are such that high quality personnel are absolutely necessary.
- d. The desirability of maintaining a permanent staff of well-trained military personnel in support of the machine processing operation is recognized as are the difficulties attendant upon procuring and administering such a group.
- e. The ROBIN project was undertaken to satisfy (1) certain pressures from outside of AFSA, and (2) a technical requirement of the Office of Operations. The over-all ROBIN program as it evolved had three phases; first, the procurement of paper-tape-driven ROBINS which are now operating; second, the expedited completion of an improved photo-electric comparator; and third, the development and procurement of DELIA, which is in the

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process of installation now. The number of ROBIN equipments that was procured was determined by the Office of Operations based upon the anticipated volume of material that was to be processed and the time desired for such processing. The final cost of the tape ROBINS turned out to be much more than the Contractor's original estimate. The second phase has not successfully materialized yet because of difficulties with the equipment. At one time there were advocates of the idea of skipping the first phase because of the second. The current state of the ROBIN program emphasizes that just the development of equipment is not the complete answer to a problem involving machine applications. The over-all ROBIN program was based on the assumption that the intercept program would bring in daily a certain volume of material. This has not materialized. The general efficiency of the operation seems to be suffering because of operating difficulties. The possible results from such a brute force search, assuming that the intercept program could provide the traffic and that there were no operative difficulties, are admittedly meager with a very small chance of success. All of these facts were known and made part of the record when the project was undertaken and approved.

2. With respect to paragraph 1 of the Inspector's discussion, I think it should not be overlooked that analytic machines offer certain advantages beside speed: Sustained accuracy and freedom from the organizational complications involved in dealing with large personnel forces should invariably accrue from the utilization of properly designed and selected equipments.

3. The division of machines into labor savers and revolutionizers is not recommended nor is the further pursuance of such a concept considered fruitful.

/s/S. Kullback
S. KULLBACK
Chief,
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