MEETING OR CONTACT REPORT

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Product Planning, White Plains	Date: November 18, 1958
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(8) 7000 X Committee -- Investigation of I. D. P.	Follow-up Date:

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Subject:

The subject of the meeting was integrated data processing and its systems requirements.

I.   IDP Systems Computer Requirements:

Factors which affect the capacity of an IDP computer are:

1.   Additional capacity is required for supervisory control programs in multiprogrammed operation.

2.   When a single transaction is processed against many master files, all programs which apply to these master files must be available in the computer.

3.   Redundant equipment must be available as safeguard against breakdown.

4.   Because of real-time availability of data, shorter reporting cycles can be expected, which result in added computing. For instance, instead of weekly reports, daily reports may be required.

5.   Also, because of the availability of current data, new applications beyond present available applications may become feasible. A further step towards scientific management can be taken.

6. Faster access to file data requires a faster computer to balance the system.

7. Sufficient computer capacity to handle peak capacity during the day should be available.

All the above factors lead to increased computer capacity. The one factor which leads to reduced computer capacity is:

8. Peak loads also occur in batch processing. In integrated processing it often is easier to counter act the peaking effect by spreading the processing in time.

II. A typical IDP system would consist of three parts: the computer, the file and input-output equipment. These three parts are loosely coupled.

The computer could be any one of the present computers. The capacity of the computer depends upon the application. Interrupt or break-in facilities are not absolutely necessary. A reliability which is a few orders of magnitude better than the reliability of the human errors in the input data is desirable. Internal checking or duplex operation may be used. The computer would have tape input and output.

The input equipment would place all incoming information on magnetic or paper tape. An incremental magnetic tape may be desirable. The tape serves as safety back up, as decoupler from the computer and as a record for auditing purposes. The decoupling makes it possible to substitute an alternate computer when the main computer is down and to stack up information while the computer is down. Also the tape makes it possible to absorb temporary peak loads. The incoming information is generated in terminal devices from cards, slugs or keyboards and usually transmitted via telephone lines to the tape units. Output from the computer may be via tapes or on line.

The file is a large random access memory. It is desirable that the file has its own control in order to obtain data from the file when the computer is down. A 310 may be used as file and file control.

The sequence: input-tape-computer-tape-output, results in a certain lag. The lag may be several minutes for incoming data. For inquiries an answer may be required in seconds and direct access to the file is desirable.

III.   <u>IDP Market Potential</u>

IDP looks good but has not yet been proven. An IDP approach is more expensive than the present batch processing approach, but the savings due to less elapsed time may be well worth it. These savings are the result of less inventory, better loading factor, customer goodwill, etc. Very few real IDP installations are available at present. SABRE is one of the first examples. Applications currently run on the 305 are not real IDP. IDP, when proven, will open many new market areas. The potential is there, but the market has to be alerted. Many IDP applications would require a computer with a capacity above the 7050.

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