

PRODUCT PLANNING & MARKET ANALYSIS DIVISION

IBM

MEETING OR CONTACT REPORT

70-6076-0

Project: EXCHANGE	Date of Report: 4/8/57
Purpose of Meeting or Contact: Determine availability and features of various printers and punches	Date of Meeting or Contact: 3/29/57
	Reported by: Jack C. Gibson
	Dept.: 749
Place of Meeting or Contact: <input type="checkbox"/> WHQ <input type="checkbox"/> Phone Other: Endicott	Follow-up Date:

List Personnel Participating

Give Report (including next action)

Indicate Distribution

- Mr. D. Calvert - Exchange Planning - Poughkeepsie
- Mr. R. Gregory - Engineering Planning - Poughkeepsie
- Mr. J. Gibson - Product Planning - Poughkeepsie
- Mr. E. Plomondon, - Endicott
- Mr. J. H. Wellbourn - Engineering Planning - Endicott
- Mr. J. E. Dayger - Printers - Endicott
- Mr. F. Demer - Chain Printer - Endicott
- Mr. J. Schick - Wire Printers - Endicott
- Mr. L. Wilson - Punches - Endicott
- Mr. F. Porterfield - Punches - Endicott
- Mr. R. Mork - Film Printer - Endicott
- Mr. L. Mulloch - Film Printer - Endicott

This is a report on a series of separate informal conferences with individuals from among the above personnel.

WIRE PRINTERS Engineering problems are down-time and noise. Down time on a 727-760-720 combination is running 83 hours per month. Engineering opinion is that down-time on the 730 will be more, because it has more parts. The 730 has been re-designed with the aim of reducing this down-time, but this new design is not in hardware. I saw a new cabinet designed to muffle the noise that looks promising.

There are currently in the neighborhood of 440 orders for 730's . Now in production are 720's at the rate of 15 per month. Many 730 customers have agreed to take 720's -- but not all. Both the 720 and the 730 appear to be underpriced.

CHAIN PRINTER This apparently is the only other experimental unit providing engraved printing that is in hardware. This printer is said to be 80% electronic and 20% mechanical--a highly desirable balance. The mechanical part only is in hardware. This unit is amazing simple and compact. Efficient speed for high quality printing will probably be about 600 lines a minute. Principal defect is limitation of number of copies to four.

This machine greatly impressed the author for its promise of high reliability, ease of servicing, small size, low cost, and high quality of printers. A model should be through testing by the end of 1958.

FILM PRINTER This printer employs a CRT to form characters that are exposed to 35 mm film. Printing occurs at 60 microseconds per character with flyback time (equivalent to carriage return) at 120 microseconds. Line position on the frame (page) is addressable and lines can be addressed in any sequence. Thus, a single frame is subject to repeated exposures; even a line can be repeatedly exposed. The programmer can also choose from among three different form slides at any time. These slides are manually changeable for greater variety. Frame-to-frame speed is dependent upon the amount printed per frame, but it is subject to a maximum of 12 frames per second. Maximum reel size is 1000 ft., enough for up to 1 + hours of printing.

The output of the film printer is a reel of exposed but undeveloped (and hence unprinted) film. Cost of the film is \$.03 per foot. The package is taller than our other equipment and Human Engineering studies are being conducted in this area. A model for use with the Exchange can be available late in 1958. A release - model is now under construction for the 704.

PUNCHES - 535, 537 Engineering opinion is that these devices are technically wrong; they spend 75% of the cycle moving the card to position and 25% in punching. These punches are merely speeded-up versions of the 100 cpm punch. If a new design of punch, which can operate at 250 cards per minute (see below) proves successful at product test, then pressure will be exerted to drop the 535, 537.

At present the 535 and 537 are under production in the laboratory. Production is limited to 50 machines to meet current requirements.

PUNCHES - 250 CPM This new design reflects considerable engineering improvement in punching cards row-wise. Fifty percent of the cycle is spent in moving the card and fifty in punching it. A model goes to product test by the middle of May 1957. The basic mechanism is to be of the read-punch-read type. It is to use drum stackers and can use the file feed device.

Four machines are planned

1. A 521 Type to run at 200 cpm with a twenty point cycle. When used with the 604 this not only will fail to reduce the calculate time by half, it will actually provide a little extra time--13 microseconds more per card. Manufacturing cost is estimated at \$2600.00.
2. A 514, 519 Type to run at 250 cpm with a 16 point cycle. This is to have two channels, one of the read-read-read type and the other read-punch-read. Manufacturing cost is estimated at \$3,000.00.

3. A 533-Type that is the same as the 519 Type except that it has four stackers, two available to the read-channel and three available to the punch-channel.
4. A 528 Type that is the same as the 533-Type except the read channel will operate at 500 cpm. It is to be called a file-maintenance punch.

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JCG/jv