

# INDUSTRIAL DATA PROCESSING APPLICATIONS REPORT

**Applications** Order Processing, Inventory Control, Sales/Operations Cost Analysis  
**Type of Industry** Paper Merchant  
**Name of User** Jersey Paper Co.  
New Brunswick, N. J.

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**Equipment Used** IBM Punched-Card Data Processing System, including:  
024 Card Punches (2),  
083 Sorter,  
085 Collator,  
402 Accounting Machines (2),  
519 Reproducing Punch, and  
523 Summary Punch.

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## Synopsis

At a time when most paper merchants associate data processing with a ten-figure annual sales volume, Jersey Paper Co. is showing that mechanized information handling can work equally well for the smaller distributor.

Using an IBM punched card system, this firm has been able to accommodate a 100 percent increase in sales volume and a 30 percent rise in accounts serviced with only a five percent increase in size of inventory. Cost analysis procedures have been so tailored under the system that stock turnover has been boosted to approximately twelve times a year, compared with the industry average of five to six times annually. In addition, net profit per sale has been improved on some products by as much as seven to 10 per cent, and customer service has been upgraded to a level far surpassing anything possible using clerical recording methods alone.

All inventory, sales and operations cost control information generated by Jersey Paper's system comes as a direct by-product of daily order processing.

For each order, pre-punched cards, denoting customer address and the individual item of merchandise required, are pulled from a bank of tub files. This deck of cards is then entered into an IBM 402 accounting machine which reads the encoded order, and prints and totals the invoice. Cost price of items on the order, as well as selling price, are printed on Jersey Paper's copy of the invoice. This enables the company to determine gross margin on the order and cost of the order, considering a comparison between gross margin and the number of stops the salesman had to make to consummate the sale.

One thing Jersey Paper Co. has learned about mechanized data processing, especially when it is applied by small and medium-sized distributors, is that while the cost to run the office usually goes up, the cost to run the business usually goes down. In other words, operating expenses associated with the simple handling of paperwork (order processing, ledger accounting, inventory maintenance, etc.) are higher with the utilization of such equipment, but total operating costs are lower. This comes about as a result of the effective utilization of information generated during everyday accounting procedures.

Jersey Paper's system includes two 024 card punches, an 083 sorter, an 085 collator, two 402 accounting machines, a 519 reproducing punch and a 523 summary punch.



CUSTOMER AND MERCHANDISE IDENTIFICATION CARDS ARE REMOVED FROM TUB FILE FOR SUBSEQUENT PROCESSING.

Since installation of the system in late 1959, the company's sales volume has more than doubled, rising from approximately \$2 million to well over \$5 million, and the number of active accounts serviced has expanded about 30 per cent. But there has been no corresponding increase in the size of inventory carried. While number of individual items offered is considerably higher than six years ago, the total number of items maintained in inventory is only about five percent greater.

This "low-level" inventory condition, according to Jersey Paper's Secretary Joseph Tabak, accounts for a significant dollar savings each year, and is directly attributable to the use of the punched card equipment. The system also has been responsible for the company's ability to boost stock turnover to about twelve times a year, compared with the industry average of five to six times annually; to improve net profit per sale on some products by as much as seven to 10 per cent; and to achieve a level of customer service which never would have been possible using clerical recording methods alone.

### The System

The improvements in Jersey Paper's operations have been accomplished as a direct result of utilization of management reports based on data compiled as a byproduct of daily procedures.



ALL ORDERS ARE PROCESSED ON THE COMPANY'S PUNCHED CARD SYSTEM.  
ANY CHANGE IN SHIPPING INSTRUCTIONS IS KEYPUNCHED ON A NEW CARD.

For each coded order, a filing clerk selects from a bank of tub files punched cards indicating name and address of each customer and item of merchandise required. The tub file represents an inventory of warehouse stock, since each card carries description, packing, purchase price and selling price of each unit of merchandise on hand. Each stock item has an individual code number; and each customer, a permanent account number.

The deck of cards, representing the customer's entire order, is now ready for processing. With customer's card placed in front of the merchandise cards, the entire deck is entered into a 402 accounting machine, which reads the encoded information and prints and totals the invoice. Since the cost price of items ordered, as well as selling price, are entered on the office copy of the invoice, it is possible to determine the gross margin on the order. Through subsequent processing, the cost of the order can also be calculated by comparing gross margin with salesman-provided data on the number of stops required to consummate the sale. This information enables the company to weed out unprofitable customers as well as to evaluate the sales ability of the salesman.

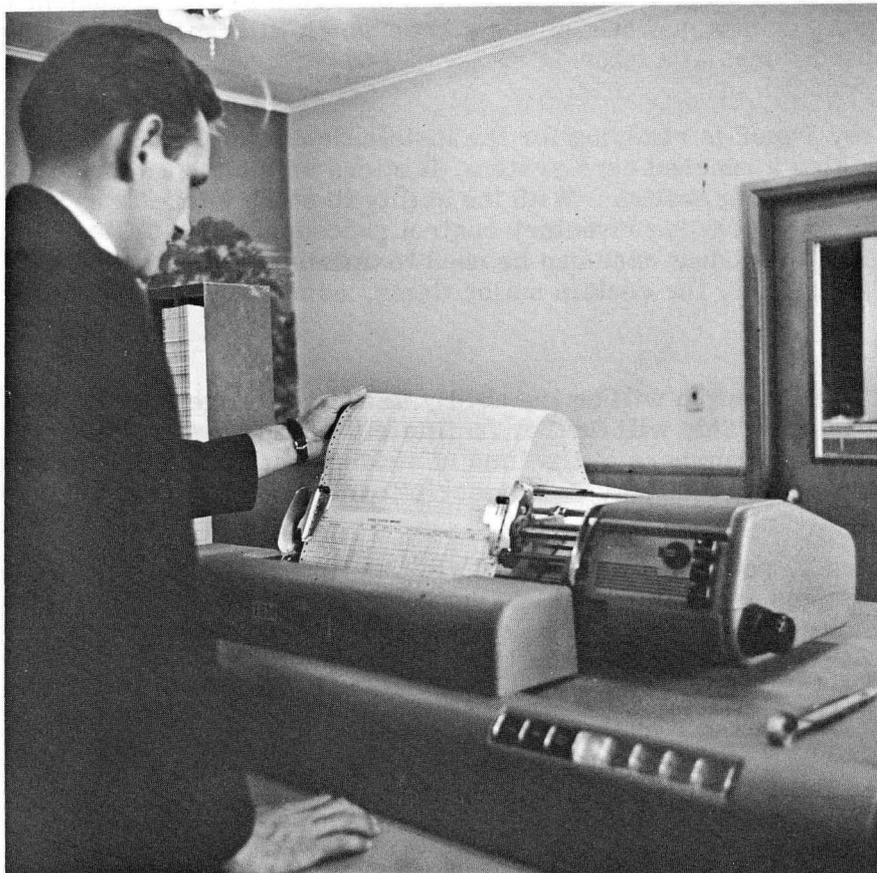
Although inventory adjustment is not automatic in this system, it can be accomplished much faster than with manual accounting techniques. Stock levels are corrected by the deletion of a pre-numbered card for each unit of merchandise ordered. The daily balance on hand can be determined simply by checking the number on the last card of each code group. This system is made possible by a procedure in which merchandise is checked against the vendor's invoice upon receipt. The invoice is then coded and sent to the data processing room where the punched card inventory records can be immediately replenished.

Processing of these unit merchandise cards also enables Jersey Paper to develop stock status reports, either on a daily or weekly basis. With this information, which again could not be derived manually, any increase or decrease in the sales of a specific item can be spotted immediately, providing a means for maintaining tighter control on purchases. Making use of information on fast and slow-sellers helps hold inventory cost to a minimum level. Slow-sellers can be removed from stock, and the volume of fast-sellers increased according to demand.

Cash owed data, compiled and punched daily following preparation of customer invoices, are run through an accounting machine to produce a deposit sheet. This report provides a check on deposits and collections for the day. Monthly, the same cards used to prepare the deposit sheet are used to prepare a report on the amount owed at the end of the month. Under the mechanized system, this information can be produced immediately instead of on the tenth of the month or later as would be the case if the information was compiled manually.

Other management reports can be developed, as required, using the punched cards associated with invoice preparation. They include:

- a general sales picture for each day;
- a history of each customer's buying habits;
- a daily sales total for comparative purposes on flow of business;
- a customer purchasing record, which shows trends in specific marketing or merchandise areas; and
- a daily loading document, which lists items required for each delivery truck.



AN IBM 402 ACCOUNTING MACHINE PRINTS OUT DAILY SALES REPORTS.

As an illustration of the importance of these reports, development of the daily loading document reduces warehouse picking time considerably, since pickers can select identical items appearing on different invoices at the same time. To make selections only from invoices, in comparison, would require repeated trips to the same bin.

Another byproduct obtained by Jersey Paper from this information processing system is the ability to categorize customers by market area (bakery, grocery, industrial, etc.) and to develop mailing labels for direct mail promotions quickly. This can be accomplished in a matter of minutes, a savings of hours over manual methods.

### Results and Future Plans

Data processing, says Tabak, is rapidly becoming a reality in the paper distributing industry. While most of the activity is still centered around the larger firms, those having an annual sales volume in the 10-figure category, the success enjoyed by Jersey Paper proves that size need not be a determining factor.

Besides giving the smaller distributor better control of costs, such a system also allows him to absorb more business, profitably, in less time. Use of punched card equipment initially also enables the company to gain the data processing experience which will facilitate a move into more advanced equipment and procedures at a later date.

Currently, Jersey Paper is readying for the installation of an IBM System/360 Model 20. Although this computer is also a punched card system, it offers an internal information storage capability not provided by the existing system. With the ability to store information within the machine, the company will be able to streamline inventory control procedures. Tub files can be eliminated. In place of tub files, a single product card can be used to update stock position. Also, purchase orders will be printed automatically for certain major items, using order points maintained within the system.

Another benefit of the system will be the ability to add a storage location number to the current item description number. This will further facilitate the placing and picking of merchandise. Items will be given bin storage numbers at the time of vendor receipt and will be stored and picked according to these numbers rather than by item description.

All of these controls, points out Tabak, are similar to those established by large distributors using large computer systems. Jersey Paper, with its smaller sales volume and its smaller scope of operation, gets the same results with a smaller data processing system: it's simply a matter of doing what's necessary to improve one's competitive position.