

INDUSTRIAL DATA PROCESSING APPLICATIONS REPORT

Applications Order Processing, Selective Inventory Control
Type of Industry Clothing Manufacturer
Name of User Catalina, Inc.
East Los Angeles, Cal.

Equipment Used one IBM 1401 Tape/Ramac Data Processing System
10 IBM 024 Key punches
7 IBM 056 Card Verifiers

Synopsis

The relationship between sales and production is now determined by an IBM 1401 tape/Ramac system at Catalina, Inc., a leading international manufacturer of swim and sportswear. The system was installed to speed selective inventory control, a vital function in the seasonal garment industry - which seeks to avoid the cost of large inventories, but must promptly fill a rush of orders which occur during only part of the year. The system has not only increased inventory efficiency, but has also made a new marketing outlook possible.

All incoming orders are transcribed to punched cards which serve as computer input media. Their information serves to update the gross dollar value booking tape, and style, color, size, and delivery order data in the disc file. Simultaneously, an acknowledgement is produced to inform the customer of the delivery status of his order.

Inventory data in the disc file is updated daily and related to unshipped orders. The system also determines if coordinates, sets of matching clothing, are to be shipped, and assembles the required stock. As shipments are allocated, packing instructions and salesmen's commissions are processed.

Through the increased sophistication of its EDP activities, Catalina has been able to achieve a substantially greater turnover of stock without increasing inventories. Reorders have increased as initial deliveries have been made sooner; and, because of the firm's heightened ability to plan shipments of coordinates, sales of these sets are expected to increase to about 95 per cent of the firm's business in 1963.

Automation for profit is the basic philosophy underlying Catalina, Inc.'s efforts to expand the scope of its data-processing activities. The company presently relies on an IBM 1401 tape/Ramac computer system, a successor to an earlier system. Its task is to further speed selective inventory control - a vital function in the seasonal and highly volatile sportswear industry, the bulk of whose orders come in a rush during a single season of the year, but must then be filled promptly. This increased sophistication of EDP at Catalina has resulted not only in greatly increased inventory efficiency but in a new marketing outlook for the company.

Catalina, Inc. is a major producer of male and female quality swim, and leisure-time wear of all types for all ages. The firm, now a wholly owned subsidiary of the Kayser-Roth Corp., the world's largest apparel manufacturer, traces its beginnings back to a small knitting mill in Los Angeles in 1912. Today, the company services clothing stores all over the world.

Catalina products are manufactured in eight factories in the Los Angeles area and Puerto Rico, occupying 350,000 square feet. All knitwear is inspected, stored, wrapped and shipped from a central warehouse and administrative building in East Los Angeles.

EDP at Catalina

Time means money in the garment industry where the sooner an order is filled, the sooner reorders will come in. Catalina's EDP applications are, therefore, programed to meet particularly stringent conditions.

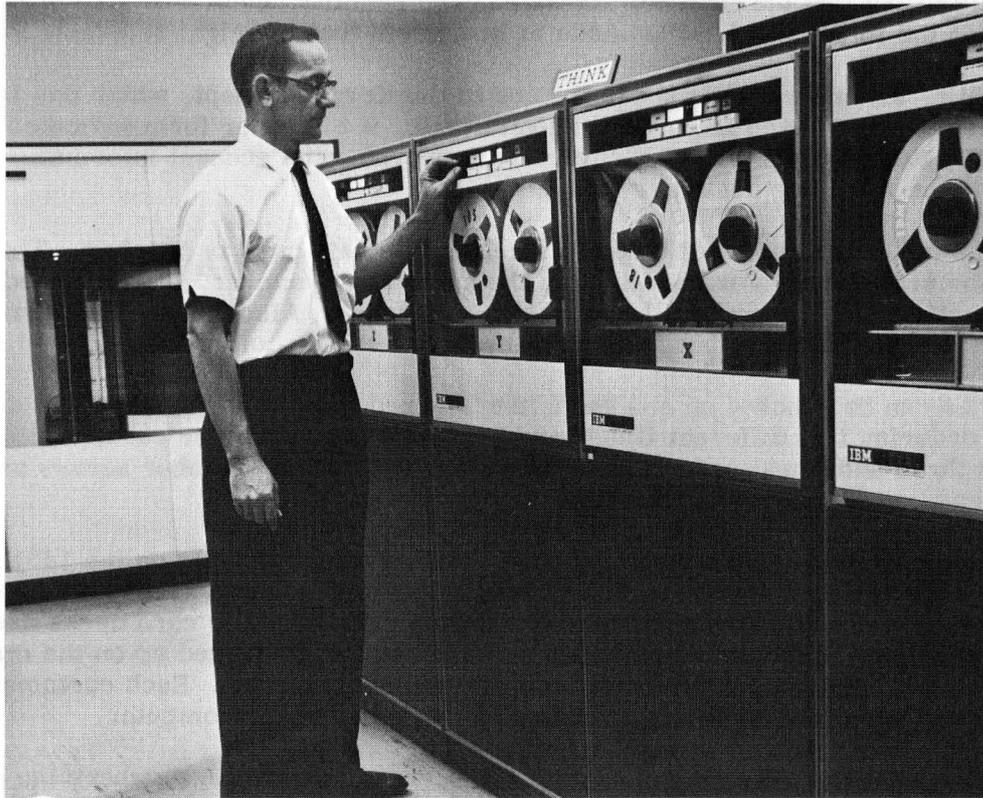
Like most other garment manufacturers, Catalina must work against back orders. This means that management must project how much of each clothing line should be provided to meet the flow of orders, which begin in October and November, from customers who usually order their entire line for the following summer at one time. Because of this, inventory seldom matches orders. It is, therefore, necessary to apply inventory on hand to orders received while using buying trends as a guide for additional manufacturing plans. Inventories, however must be kept as small as possible, for the state of California levies a property tax on inventories, and the bigger the inventory, the bigger the tax.

Filling orders in this industry is further complicated by the whimsey of customer trends. Designers can only establish styles to a limited extent. Management must, therefore, do some inspired guesswork as to which item of a basic line will be most popular. These estimates form the basis on which the warehouse is stocked when the salesmen go on the road at the start of October. Then and then only does the firm get the first hint of whether its estimates have been accurate. From then on, it must play a touchy game of meeting orders from available stock and adjusting production to sales.

To meet these needs, management installed an IBM 1401 tape/Ramac data processing system, in November, 1961, at its East Los Angeles headquarters. It replaced an IBM 305 Ramac which had been installed in 1958 to convert inventory control, dispatching of orders, billing and sales analysis from a conventional punched card system. This system had been credited with enabling the firm to fill more orders than was ever before possible. Also, by being enabled to meet these orders with less inventory, Catalina slashed \$75,000 off the previous year's property tax bill in the 305's first year of operation.

Conversion to a 1401 system was not caused by changes in workload or increased volume of business, nor has the new system caused a further reduction in inventories. Management

simply wanted to speed up selective inventory control which determines when orders should be shipped. Presently, all incoming orders are routed through the Data Processing Department. All shipping instructions, invoices, other associated paperwork and statistical reports also originate there. A potential bottleneck has thus been broken - one where it sometimes took as much as ten days for a processed order to be considered for delivery. Now, processed orders are considered for shipment every other business day. This has put management a week closer to the latest trends in what customers are buying. It has also resulted in a quicker turnover of stock without increasing inventory.



IBM 7330 MAGNETIC TAPE UNITS are used for customer master information input and to maintain a daily accounting of outstanding back orders. An **IBM 1405** random access **DISC FILE** keeps inventory and sales records.

Applications

The 1401 computer system is used to determine how much of, or whether or not, to ship an order. The decision is based on many variables, including:

1. Are stocks on hand adequate to fill the entire order? If not, are they sufficient to allow an immediate substantial delivery? Should the order be held until a substantial delivery can be made?
2. If a partial delivery is being made, does it fulfill the customer's plans for selling coordinate items (matching sets of sweaters, shorts, etc.)? In other words, the question is whether an order including a similar number of matching items should be delivered if all these items are not immediately available. The ability to automatically determine what are coordinated orders, and to ship these intact, has had a great marketing impact.

Order Processing

Most customers order their entire summer line at one time. These orders are forwarded to Catalina's Order Registry Dept., located in the same building as the Data Processing Div. There, new customers are assigned a number in a master file card index. The order itself is assigned a number which is listed on the master card. Old accounts merely have the order number listed on their master cards.

At this point, orders received directly from an account are transferred to a standard form which lists every line the firm has for sale. The quantity, color and size ordered for each line are noted on the form. A check is made to be certain that the right salesman is listed.

Meanwhile, all order forms are delivered to the Key punch Dept. which has 10 IBM 024 card punch machines and seven IBM 056 card verifiers. If the order form indicates a new account, the operator punches a header card. This provides the account information which will be included, on a master customer tape.

For each customer, new and old, a miscellaneous data card is punched. This card includes all customer account information, plus the salesman's number, the promised date of delivery, the method of delivery and the billing arrangement. Also, every line item shown on the order form is transferred to punched cards by product line, color, quantity and size.

Two lines can be punched on one card, thereby reducing input time to the computer. A new customer ordering five different lines would actually have a header card, a miscellaneous data card, and three additional order cards punched. The account number serves as the customer's "address" on the magnetic tape file.

After machine sorting by account, the cards are processed daily on the 1401 system whose configuration includes four 7330 tape drives and a 1405 random access disc storage unit with a capacity of 20 million alphanumeric characters. As order card decks are fed into the system new customer information and changes in accounts are picked up on the master tapes. At the same time, orders are broken up by category of merchandise. Each customer's order in every category is "edited" to verify accuracy of input data to the computer.

The order in each category is then added to a gross booking tape, where the gross dollar value of outstanding orders is adjusted.

At the same time the 1405 Ramic file is updated by style, color, size, and month of delivery. A customer acknowledgement form is printed out by an on-line printer, and a tape is created which will become part of the unshipped file. This form, which is sent to the customer, tells him that his order has been accepted and is being processed. It details the delivery status of ordered merchandise.

In this one run, therefore, the following operations have been completed:

1. Updating of the master account tape.
2. Updating of the Ramic file containing information for weekly management reports.
3. Production of customer acknowledgements.

Additions, deletions or other changes in order information are made daily, so the back order information available to the 1401 system is always up to date.

CATALINA, INC.

Final invoice information is keypunched and processed as shipments are made. This data includes the date and method of shipment, shipping costs, and the number of pieces and weight of each package. Also, if anything is not shipped, this information is related.

The printout from this new information is on an invoice form, and includes the computed charge (cost minus any allowable discount) and the date payment is due. As a measure of the effectiveness of the new data processing system, all invoice information received by noon Friday is included in management's Monday morning inventory and sales report.

SIZE RANGE	GROUP	QTY	UNIT PRICE	AMOUNT
10060	CAMEL HORN BLACK	27	\$5.90	159.30
10062	CAMEL BLACK	16	\$8.15	130.40
10064	CAMEL BLACK	8	\$8.15	65.20
11052	CAMEL	12	\$6.35	76.20
14022	GREY COMB BLACK COMB	4	\$16.25	65.00
14052	TAUPE COMB BLACK COMB	12	\$10.25	123.00
14054	CAMEL/GREY	3	\$10.25	30.75
15008	TAUPE RED HEAT GREY	8	\$9.75	78.00
SUBTOTAL			724.35	
10 LBS SHIPPED 7-13 VIA CATALINA AIR POST				10.00
1 CAREON				734.35
INVOICE TOTAL				734.35

Results

Since its 1401 system checks orders every day, instead of every tenth day, Catalina is now able to process more partial orders. Where the company used to be reticent about filling a small part of an order because it might be several weeks before the rest could be considered, it now does this readily - knowing that the rest of the order will be reconsidered within a few days.

Catalina has thus been able to turn over inventory much more rapidly without dangerously depleting stock to fill large orders; or worse, letting large orders go unfilled. At the same time, the system's ability to decide what are coordinate orders has greatly encouraged customers to retail these intact as sets.

The benefits of speeded up selective inventory control became apparent during the first quarter of 1962, subsequent to the 1401 system's installation in November, 1961. They include:

1. With the same inventory on hand, shipments of merchandise increased by more than 1.8 million dollars over the previous year. This was simply a question of being able to evaluate stock status data faster, match it to existing orders, and thereby ship goods more quickly.
2. Since stock now reaches store shelves faster, an unprecedented increase in reorders has been stimulated. Usually, customers order their summer line starting in early November. By getting orders out faster, the company has given the customer something to sell. The result is that he has gotten more business for the Catalina lines and is buying more from it.
3. Catalina is able to quickly determine when a customer is interested in marketing coordinates, and thereby plans shipments to meet those requirements. As a result, management has actually changed its marketing outlook. By emphasizing the sale of coordinates rather than piece goods, the company operates in a less competitive, higher-priced market where quality products are at an advantage. While less than half of 1961 sales were coordinate items, management now anticipates increasing this figure to about 95 per cent by 1963.