

# **INDUSTRIAL DATA PROCESSING APPLICATIONS REPORT**

**Applications** Order Processing  
**Type of Industry** Women's Wear Manufacturing  
**Name of User** Berkshire Apparel  
Malden, Mass.

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**Equipment Used** Honeywell 1200 computer system  
IBM Unit Record Equipment  
Mohawk Data Recorders

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## **Synopsis**

Berkshire Apparel uses a Honeywell 1200 system to handle order processing for some 6,800 retailer customers throughout the country. For larger accounts, order input is actually an inventory report supplied by the customer on a periodic basis. This data is processed against pre-determined inventory and order levels stored in the computer system and updated monthly. For other customers, orders are taken by salesmen operating out of regional offices and sent to company headquarters in Malden for entry into the system. Output from the system includes a multi-part picking/packing list used in shipping, to provide input for billing and for back ordering of merchandise.

Berkshire Apparel of Malden, Mass., is taking the guesswork out of the highly fluid and fiercely competitive women's fashion industry with a Honeywell 1200 computer system.

Designing a system to meet the needs of a highly viable industry is no mean task, but Berkshire appears to have found a formula which allows manufacturing and distribution to stay abreast of increasing sales.

Since its founding in 1939, Berkshire has recorded an uninterrupted chain of sales and profit increases. The company specializes in a product line of women's dresses priced between \$15 and \$36 retail. Although keeping pace with fashions, Berkshire's dresses can be described as conservative. Not greatly affected by fads, sales remain relatively constant. Sales volume is between \$20 and \$25 million annually.

The company's products are produced in six New England plants and sold under the labels of its Berkshire and Parkshire Divisions.

In all, some 1,000 different styles are produced for four Berkshire retail lines during the course of the marketing year. National distribution to 6,800 retail accounts ranging from large department stores to small dress shops, is handled by a force of 50 salesmen working out of regional offices in New York, Los Angeles and Charlotte, N. C.

#### EDP AT BERKSHIRE

In 1959, Berkshire installed an IBM 602 calculator and supporting tab equipment. The earliest applications for the equipment were bookkeeping, accounts receivable and order writing and billing. In addition, a "Cut and Sold" report, basically a listing of inventory manufactured and sold, was generated as a by-product. Machine processing was also extended to payroll and company benefit deductions.

Yearly volume, at the time the early equipment was installed had reached a new high of \$5.8 million. Expanding business, however, put a great deal of pressure on the system, and management ordered successive upgradings of the installation, which, at its peak, included three IBM 602 tabulators. It soon became apparent that although the configuration was adequate to meet the company's needs, more computing power would be needed to meet future forecasts. An IBM 1401 computer was installed. Peripheral equipment with the 1401 system included a 1402 card read-punch, three 1311 disc storage units and an IBM 1403 printer.

The greatest bulk of Berkshire's programs were developed with the installation of the 1401 system. A later study showed that Berkshire's growing needs could be served more efficiently with a Honeywell 1200 system.

The company's current configuration includes the central processor with 16,000 characters of core storage, three disc drives capable of storing 24 million characters, four tape drives, a 400 card-per-minute reader-punch and a 650 line-per-minute Honeywell printer.

Input is prepared on six keypunch units and two Mohawk Data Recorders which record input on magnetic tape. The company plans to reduce the keypunching configuration in the future with installation of Honeywell Keytape units which, like the Mohawk units, record input directly onto magnetic tape.

#### RETAIL UNIT CONTROL SYSTEM

In the fast moving ladies garment industry, moving goods from the manufacturer to the retailer is of paramount importance. Delays can be costly if customers are turned away from depleted racks and counters.

Berkshire meets this problem with what it calls the Retail Unit Control System (RUC). Basically, because Berkshire manufactures a somewhat stable line with sales patterns that vary little from year to year, the system is designed to forecast and plan the year-around deliveries which individual sales outlets must have to support a given volume of business.

In essence, Berkshire maintains inventory levels and shipping schedules for its customers with the RUC system. The prime requisite for implementation is an agreement between Berkshire and its customer, under which the customer purchases a mutually agreeable dollar value of merchandise over a 12-month period. Berkshire agrees to make deliveries which will keep current inventories up to predetermined monthly levels which may vary widely from month to month. These deliveries represent positive sales--not consignments--and the figures which Berkshire forecasts for each store's RUC plan must be thoroughly realistic.

Well over 300 retail outlets are on the RUC system. When a new store is brought into the system Berkshire examines that store's historical sales records to determine seasonal sales fluctuations and the percentage of business done during each month of the entire year. They also examine the store's stock turnaround records and determine the number of times inventory has been turned over during the course of a year. The figure is arrived at by dividing total sales for the 12-month period by the average monthly inventory value.

If the store's information is inadequate, Berkshire's financial analysts depend on Federal Reserve regional industry sales percentage figures. These figures, along with Berkshire's own regional sales figures, are normally good indicators of the store's inventory needs for the first year. Subsequently, Berkshire evaluates the store's actual figures at the close of the first year of business and comes up with even more realistic sales figures.

The information collected by Berkshire is keypunched into individual cards which carry the following data: total annual sales, historical store sales data, stock turnover or equivalent information, name of company, store address and department number.

The information is stored on disc files and used to come up with a complete yearly plan for the store. Monthly information is shown on a February through January basis (the traditional inventory year) with each monthly column on the Master Retail Unit Control Form showing the appropriate delivery and sales figures, Federal Reserve and store percentage figures.

One of the prerequisites of the RUC system is an inventory system in the stores. This is a manual system. The stores send weekly inventory reports to Berkshire where the data is fed into the computer and used to bring that store's records up to date and determine any changes that may be necessary in the ordering cycle.

#### Other order entry

Not all stores are qualified to participate in the RUC system, due to the volume necessary to maintain it. Most of Berkshire's customers are smaller operations which order merchandise in the traditional manner--from salesmen who call on them periodically. The salesmen forward orders to Malden where they are sorted, edited and given an order number. The order data is then recorded directly on magnetic tape by operators of Mohawk data recorders. The magnetic tape is then input to the computer system.

During the processing run, customer identity data is checked against the disc-stored customer record file. At the same time, the system is programed to check the store's credit limit and determines whether or not that store is returning goods excessively. This data also is on discs. After the order input clears these editing procedures, a three-part shipping

**BERKSHIRE APPAREL**

order form is printed out. One part is used in the shipping room, another goes to the salesman and the third is kept in Berkshire's home office files. The system also outputs a five-part picking/packing list containing basically the same information contained on the order. At the same time, the open order file, on discs, is updated.

FROM						FROM																	
SHIPPED VIA			NO. OF PKGS.			WEIGHT			SHIPPED VIA			NO. OF PKGS.			WEIGHT								
POSTMASTER: THIS PARCEL MAY BE OPENED FOR POSTAL INSPECTION IF NECESSARY. RETURN POSTAGE GUARANTEED.						CUSTOMER ORDER NO.						POSTMASTER: THIS PARCEL MAY BE OPENED FOR POSTAL INSPECTION IF NECESSARY. RETURN POSTAGE GUARANTEED.						CUSTOMER ORDER NO.					
INVOICE NUMBER		FREIGHT CHARGES		INSURANCE		TOTAL		LINE NO.		CUSTOMER NO.		ORDER NO.		CUSTOMER ORDER NO.						PRICE / DOZ.			
ROUTING										STYLE NUMBER		QUANTITY DOZ. 12TH											
												ONLY STYLE NUMBERS											

**THE SHIPPING ORDER CONTAINS DATA ON SIZES, COLOR, QUANTITY. IT'S A THREE PART FORM.**

ORIGINAL SHIPPING ORDER																													
SOLD TO												<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">DATE</td> <td style="width: 33%;">S'MAN</td> <td style="width: 33%;">CUSTOMER NO.</td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>						DATE	S'MAN	CUSTOMER NO.									
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STYLE NO.		W	46	48	50	52	26 <sup>2</sup>	28 <sup>2</sup>	30 <sup>2</sup>	32 <sup>2</sup>	ASSORTED	COLOR	QUANTITY		PRICE PER DOZEN	REMARKS													
		H	10	12	14	16	18	20	22	24			26	DOZ.			12THS												
		P	5	M	L	XL																							

**COMBINATION PICKING/PACKING LIST IS PRINTED OUT IN FIVE COPIES AND USED TO FILL ORDERS IN THE WAREHOUSE.**

The picking/packing list is forwarded to the warehouse. Orders are seldom filled in entirety, for several reasons. Not all colors and styles are produced at the same time, so the items may not be available for shipment. Additionally, many of Berkshire's customers prefer to stagger shipments over a selling season to assure a steady flow of fresh inventory to their racks.

For those items that are shipped, a warehouseman indicates shipment on one copy of the picking and packing list and sends it to the data processing department. Data from the warehouse is then input to the system (either via punched cards or data recorders) and used for billing.

Copies of the picking/packing list are kept in the warehouse to fill backorders. When the warehouse is notified that it is to receive merchandise from production, the file is checked and the backordered items are then shipped. The warehouseman notes shipments on the copies of the picking/packing list and sends them to data processing.

Billing is done on a daily basis to cover merchandise shipped on that particular day.

**SALESMAN'S COPY**  
**NEW YORK OFFICE**  
**ACCOUNTS RECEIVABLE COPY**

BERKSHIRE APPAREL CORPORATION  
 MALDEN, MASSACHUSETTS 02148

TEL: 617 321-2350

SOLD TO \_\_\_\_\_ SHIP TO \_\_\_\_\_

D-U-N-S 100-3250

SALES- MAN	CUSTOMER NO.

SHIPPED VIA	INVOICE DATE	INVOICE NO.
CUSTOMER ORDER NO.	TERMS: 8/10 EOM FOB FACTORY	NO ANTICIPATION ALLOWED
		OUR ORDER NO.
STYLE NO.	DESCRIPTION	AMOUNT

**INVOICE: BERKSHIRE BILLS ONLY AFTER GOODS HAVE BEEN SHIPPED.**

Payments received are also processed daily, the data being entered by either keypunch or the Mohawk units.

During accounts receivable processing, a disc file of accounts receivable data is updated. This is one of three key disc files in Berkshire's system. The other two are the customer order file and open order file. Historical data is stored on magnetic tape.

Production and inventory

Production and inventory scheduling are not handled by computer, although the output from the system is used in determining inventory levels and production schedules. Berkshire manufactures a minimum amount of inventory at the beginning of each selling season. Information on the most popular styles, culled from the magnetic tape record of past sales, is used in initially ascertaining production and inventory. In addition, a monthly best seller report, produced from data gathered during order processing, is used to adjust production and inventory levels when necessary. The best seller report determines the 10 best selling styles by geographic areas and is used to alert salesmen to stores in the areas which have not ordered the best selling items. Another report used in determining production is the cut and sold report, produced daily, which is a profile of the company's business for the previous day. It shows sales, by styles and division, and also shows cumulative sales for the previous four weeks.

A number of other reports are produced weekly, monthly and quarterly. They include:

#### WEEKLY REPORTS

- Shipment and On Order Report which includes a listing of orders being held up pending approval of credit.
- Sales by Color Analysis which lists sales of each dress style by color to determine cutting orders and highlight on-hand stock deficiencies in terms of units and percentages.
- Sales by Size Analysis
- A Production Report which is used to monitor current operations. It is run weekly and recapitulated monthly to provide the cost and profit factors which affect the production of a new line. Costs are input and necessary adjustments are made before actual production begins. The report is run with both actual and estimated figures. It includes:
  1. Number of Units Ordered
  2. Number of Units Finished
  3. Goods in Process
  4. Material Cost Breakdown
  5. Labor Cost Breakdown
  6. Gross Profit

#### MONTHLY REPORTS

- Piece goods inventory report which is based on matching stock received with cutting tickets issued during the period.

#### QUARTERLY REPORTS

- Salesman's performance by area report which is run separately for each company division and then consolidated. It compares each salesman's performance with the quarter just elapsed and the corresponding period last year. It also shows the salesman's performance during the succeeding quarter of the previous year, as well as the percentage of the division's sales which he achieved during the quarter elapsed.
- Sales Performance by State Report analyzing current and historical sales performance for each division by state, rather than salesman. It includes, though, a list of all salesmen covering that state.
- Quarterly sales report providing a detailed listing of all sales for the preceding period by division, area salesman and account.

#### RESULTS AND FUTURE PLANS

At the present time the Honeywell 1200 is more than sufficient to cover Berkshire's needs. When the decision was made to go to a third generation computer and the company switched from IBM to Honeywell, a complete reprogramming effort was needed. The firm rejected Honeywell's Liberator programs due to cost, and rewrote all of its programs in Autocoder. Cobol was rejected because it was felt it used up too much core storage and the company could get a better payback in another language. This stance has proven valid and Berkshire sees no major upgrading effort in the near future.

Piecework payrolls will be a major source of concentration in the future, as will use of the computer for the manufacturing function. Major computer benefits include a better overall view of the company's financial picture, as well as more empirical knowledge of Berkshire's overall marketing effort.