

INDUSTRIAL DATA PROCESSING APPLICATIONS REPORT

Applications Order processing, inventory control, invoicing
Type of Industry Food Distribution
Name of User Consolidated Foods
River Grove, Ill.

Equipment Used IBM System/360 Model 30

Synopsis

The company uses a System/360 Model 30 computer to maintain its inventory, generate purchase orders, and keep its customer receivables file current. Consolidated uses its master inventory item file to generate an order book for its customers. Sections of the book return to the data processing department as orders are keypunched and enter the system at that point. Inventory levels are maintained by IBM's IMPACT file maintenance system, and inventory replenishment is becoming entirely automated. Various management reports are computer-generated daily, weekly and at will. An accounts receivable file is maintained on the customer name and address master file. The controls applied by the computer system will eventually trim the \$3 million inventory which is kept on hand.

Before installation of an IBM System/360 Model 30, Consolidated Foods had been using an IBM 1401 which became too small for the company's operations. Program conversion began a year before the System/360 was installed. "We reprogramed everything," explains Lloyd Michalsen, data processing manager. It has since proven that putting the entire new system on at once was worth the effort. Consolidated's programs are in Cobol, and the system uses IBM's IMPACT system for sales forecasting. An inventory of \$3 million worth of grocery items is maintained in Consolidated's warehouse. Approximately 10,000 items are kept on hand. Meat is not stocked, although frozen foods are maintained. Non-foodstuffs, such as cleaning compounds and paper products, are also part of the inventory.

The company services 550 supermarkets within a 100 mile radius of Chicago, and maintains about 2,000 accounts with institutions. Consolidated also performs as an in-transit operation (acting as merchandise terminal, repacking railroad car freight shipments according to requirements from warehouses in various parts of the country). The company sells, from its processing plants, to other wholesalers. Primarily, Consolidated's operations as a wholesale company comprise both the company's greatest activity and its computer's most extensive use.

THE SYSTEM

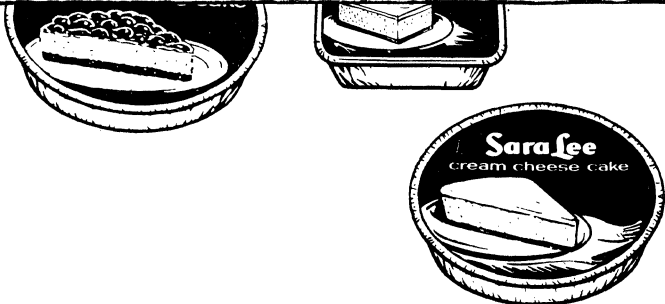
Order Processing

All of Consolidated's inventory is on a master item disc. This master item disc is printed out, every four weeks, on specially-designed offset plates. The plates are taken to the company print shop and used to print over 500 copies of Consolidated's grocery order guides. These order guides are mailed to the customers who return orders from them. The guide lists all the merchandise available in the warehouse and is printed with each item name, case quantity, price and cost. Next to these are four tear-off strips, each with the item number printed on it, and a space where case quantity can be indicated. The strip perforation allows it to be detached, along with corresponding strips from every other page, all held together with a section of binder on top of the page. Once the orders are torn off, what resembles a long, thin order book is ready to be mailed to Consolidated. The item code will be used for keypunching and for identifying the item and its location in the warehouse. The top page of the order book contains the strip number, the store name and address.

Strips are received by Consolidated by mail and the data is then punched into cards. There is space for nine items to be punched into each card. Punched are the quantity, the product code number and the customer number for customer identification. A second separate deck of information may be punched into a card for institutional orders. However, for regular orders, only the top half is used.

Once customer order strips are punched into cards, the cards are verified. Verification is assisted by a self-checking digit on the code number. Cards are batch processed during the day and the first orders are run at 8 a. m. , the last at 5 p. m.

Sale and promotional items are handled differently. These goods are assigned special flyers printed weekly which also contain store operators' tips on merchandising and display. Sale items have tear-out strips with an order quantity listed on each. These strips are mailed in with the regular order strips.



CONSOLIDATED FOODS

— CORPORATION —

VOLUNTARY FROZEN FOOD DEPARTMENT

8999 Palmer Street
RIVER GROVE, ILL.

60171

	STORE NAME ADDRESS Vol. X	STORE NAME ADDRESS Vol. X	STORE NAME ADDRESS Vol. X	STORE NAME ADDRESS Vol. X
	4	3	2	1

REALEMON LIMEADE	24	6 OZ	2/25	2.08	150748	150748	150748
REALEMON LEMON	24	6 OZ	2/25	2.08	150706	150706	150706
REALEMON WHISKEY SOUR MIX	24	6 OZ	.25	4.37	150920	150920	150920
SNOW CROP ORANGE JUICE	48	6 OZ	.25	8.77	150888	150888	150888
SNOW CROP ORANGE JUICE	24	12 OZ	.49	8.57	150904	150904	150904
TREE TOP APPLE JUICE	48	6 OZ	2/41	3.40	150821	150821	150821
WELCH GRAPE	48	6 OZ	2/41	7.53	150409	150409	150409
WELCH GRAPE	24	12 OZ	.37	6.63	150425	150425	150425
TROPIC FR DAQUARI MIX	24	6 OZ	2/57	4.53	151969	151969	151969
COFFEE WHITNERS							

THE CONSOLIDATED FOODS ORDER BOOK. EACH STRIP SECTION IS SENT TO CONSOLIDATED EACH WEEK WITH THE SUPERMARKET'S REQUIREMENTS NOTED NEXT TO THE ITEM NUMBER. ALL ORDERS ARE C. O. D.

CUSTOMER NUMBER		BILLING INPUT SPREAD CARD																																
		ITEM 1							ITEM 2							ITEM 3							ITEM 4							ITEM 5				
QTY.	CODE	QTY.	CODE	QTY.	CODE	QTY.	CODE	QTY.	CODE	QTY.	CODE	QTY.	CODE	QTY.	CODE	QTY.	CODE	QTY.	CODE	QTY.	CODE	QTY.	CODE	QTY.	CODE	QTY.	CODE							
																												0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1						
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2						
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3						
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4						
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5						
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6						
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7						
8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8						
9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9						

CUSTOMER ORDERS ARE PUNCHED INTO CARDS AS ORDERS ARE RECEIVED.

CONSOLIDATED FOODS

IBM's IMPACT (Inventory Management Program and Control Techniques) assists Consolidated's data processing operation. The program can be used to forecast future demand for inventory items, to measure and adjust to changing demands; it indicates when and how much to purchase and ensure that quantity discounts and most economic freight rates are realized. IMPACT involves the master inventory item disc and the master history disc.

Cards are read into the system, subtract the ordered goods from the inventory, and project needed quantity amounts by certain dates. As a result of the customer order run, the computer prints out a two-part form which is simultaneously a warehouse picking ticket and a customer invoice. Customer orders are printed in warehouse item sequence. Warehouse locations are organized into "slot" numbers matching item numbers for each in product picking. Items are picked by code, not by description.

CONSOLIDATED FOODS CORPORATION
DISTRIBUTION DIVISION

STOP # 118
VOLUNTARY

8999 PALMER STREET
RIVER GROVE, ILL. 60171

SHIP VIA

REGISTER NO.

91489959111810 2

OFFICE COPY

CONSOLIDATED FOODS CORPORATION
DISTRIBUTION DIVISION

STOP # 118
VOLUNTARY

8999 PALMER STREET
RIVER GROVE, ILL. 60171

SHIP VIA

REGISTER NO.

91489959111810 2

TERMS: Net Cash
LOCAL - Gladstone 6-7600

QUAN.	PACK	SIZE	DESCRIPTION	CODE	UNIT PRICE	EXTENDED AMOUNT	WEIGHT
10037	5	012046	OZHAWN ROSY RD PUNCH	320762	361	1805	220
10039	1	PA# 942	CASES 5 AMT	25 EXT AMT	1.25	1.25	
10058	1	0061/2GAL	MEN APPLE CIDER	318444	330	330	38
10161	1	012035	OZMUTTS APPLE SAUCE	302240	476	476	38
10189	1	048103/4OZ	CAMP VEG BEEF SOUP	356469	785	785	40
10253	1	012QT	MIRACLE WHIP DRESS	366443	679	679	36
10253	1	C24001	LBDOM LITE BRN SUG P	426585	370	370	26
10253	1	C24001	LBDOM 10X CONF SUG P	426601	370	370	26
10253	1	C24001	LBDOM 10X CONF SUG P	423665	554	1108	102
TOTAL MERCH. AMT.							174426
CARTAGE CHARGE							
TOTAL INVOICE							174426

STATEMENT

MERCHANDISE

PAY THIS AMOUNT

QUAN.	PACK	SIZE	DESCRIPTION	CODE	S.P.	UNIT PRICE	EXTENDED AMOUNT
5	012046	OZHAWN ROSY RD PUNCH	320762		.35	361	1805
1	PA# 942	CASES 5 AMT	25 EXT AMT		1.25	1.25	
1	0061/2GAL	MEN APPLE CIDER	318444		.65	330	330
1	012035	OZMUTTS APPLE SAUCE	302240		.47	476	476
1	048103/4OZ	CAMP VEG BEEF SOUP	356469		.19	785	785
1	012QT	MIRACLE WHIP DRESS	366443		.55	679	679
1	024001	LBDOM LITE BRN SUG P	426585		2/35	370	370
1	024001	LBDOM 10X CONF SUG P	426601		2/35	370	370
2	010005	LB PILLSBURY FAM FLOU	423665		.63	554	1108
PA# 752	CASES	2 AMT	.70 EXT AMT		1.40	1.40	
1	008001	GAL CLOROX BLEACH PLAS	448001		.65	314	314
1	008001	GAL CLOROX BLEACH PLAS	448183		.39	256	256
TOTAL MERCH. AMT.							174426
CARTAGE CHARGE							
TOTAL INVOICE							174426

STATEMENT

MERCHANDISE

PAY THIS AMOUNT

QUAN.	PACK	SIZE	DESCRIPTION	CODE	UNIT PRICE	EXTENDED AMOUNT	WEIGHT
10810	1	PA# 983	OZGR GIANT PEAS	440	644	644	24
10874	1	0240303	RCH TINY ISV EJ PE	331827	600	600	54
10929	1	02402	RICH CALIF TOMATOS	335547	600	600	54
10958	1	0240303	FRANKS KRAUT	334482	348	348	31
TOTAL MERCH. AMT.							867
CARTAGE CHARGE							
TOTAL INVOICE							867

STATEMENT

MERCHANDISE

PAY THIS AMOUNT

SHOW CUSTOMER NO. AND TERRITORY NUMBER ON REMITTANCE FOR PROPER CREDIT.

STORE SUPPLIES	RETAIL	TOTAL MERCH. AMT.
		CARTAGE CHARGE
		TOTAL INVOICE

IMPORTANT - PLEASE NOTE
No claims for damaged products or shortages will be considered unless the Company is immediately notified and any damaged products are held for inspection. We warrant that the products described in this invoice are not adulterated or misbranded within the meaning of the Federal Food, Drug and Cosmetic Act, as amended.

THE CUSTOMER INVOICE AND PICKING LIST IS A TWO-PART FORM. THE CUSTOMER'S HALF (RIGHT SIDE) IS DELIVERED ALONG WITH THE MERCHANDISE. THE LAST SECTION OF THE FORM IS THE CUSTOMER STATEMENT.

The Master Files

Three disc files comprise the master records for Consolidated Foods. The master inventory item file contains the stock number for each item, the item description, item costs, selling price and retail price. A total of six retail prices are maintained on disc. Movement figures are also stored on the disc. These include selling history, marketing information for all areas. Out-of-stock information, is retained for inventory service reporting. These are levels maintained for printing out by IMPACT.

A master history file contains the selling history of each item. It forecasts sales for ordered merchandise via IMPACT's calculation of sales demand.

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A master name and address file, the third master file, contains customer sales history. Routing instructions and delivery dates are listed on this disc. The open receivables file is also listed on this disc; payments, credits and adjustment information is listed for each customer.

Inventory Control

A stock status report is listed at the end of every day. This is an exception report and is generated from the master inventory item disc, listing the items that have dipped to dangerously low quantities or have reached an out-of-stock condition. It also lists what has been received each day in the warehouse.

10/25/68			-----RECEIPTS-----				-BELOW MIN-		OUT	STK					
ITEM	PKC	SIZE	DESCRIPTION	SLOT	BEGIN	RCPTS	#	INV	CT	INV	MIN	NO.	AMT	SEQ	B
323881	024	0303	RICH 1SV WH GR BEA	40339									3	4	00810 4
324129	024	008	OZ RICH 3SV CUT GR BN	10693	62	1	63	1		57	220				00870 4
324707	024	0303	RICH DK KIDNEY BEA	10077	204	1	205	1		189	350				01050 4
325126	024	0303	MON GR GRN LIMAS	10742	330	1	331	1							01190 4
325761	024	0303	RICH CUT WAX BEANS	10746						178	180				01380 4
326025	012	016	OZ MON PKLD SLIC BEET	10749	95	1-	94	1		92	120				01430 4
326082	024	303	MONARCH DICED BEET	40370									3	3	01480 4
326983	012	016	OZ RICH HARVARD BEETS	10762									2	2	01730 4
328088	012	016	OZ RICH RED CABBAGE	10766									3	3	01760 4

STOCK STATUS EXCEPTION REPORT: THE HEADING "MIN" INDICATES ITEMS THAT ARE NOT ON THE AUTOMATIC REORDERING SYSTEM, LEAVING THE CONSOLIDATED BUYER TO DECIDE WHETHER TO PURCHASE OR NOT.

Once a week, the entire Consolidated inventory is listed as a check for the buyer who still must keep track of large quantities of products. The buyer purchases merchandise from vendors using both the stock status report and the inventory listing. This operation requires manual order preparation for vendors.

A large part of Consolidated's inventory is on the computer's automatic reorder system. The computer, using IMPACT flags items on the inventory item disc, prints out the flagged low stock items on purchase orders. The purchase order is in four parts--office copy, vendor copy, warehouse copy, and buyer copy. One part of the purchase order is sent to a vendor and another section is later used as a receiving ticket. The purchase order shows first the item code, the slot number in the warehouse where the goods are to be stacked, the quantity ordered and the cases received. The office copy is returned to the data processing department and new cards for the goods received are punched from the office copy, sent to the computer, and added to the master item inventory file. A warehouse clerk checks the goods as they enter the warehouse, and in the column marked "Cases Received" he enters the amount actually received if the shipment is short. The number of goods actually received is punched into a card and entered into the system.

The cards for received goods relieve the "on order" flag against the items on the master item inventory file and add received quantities to that file.

CONSOLIDATED FOODS

CONSOLIDATED FOODS CORPORATION										No. 127238			
Distribution Division													
8999 PALMER STREET RIVER GROVE, ILLINOIS 60171													
WESTERN UNION - WUX RIVER GROVE — ALL PHONES: 312 National 5-5600 — TELETYPE 312-456-4272													
WAREHOUSE RECEIVING CLOSSES 1 P.M. DAILY										DATE _____			
TERMS _____			TRADE DISCOUNT _____			F.O.B. _____			O.S. & D. _____				
SHIP TO ARRIVE _____			SHIP VIA _____			FREIGHT RATE _____			DATE RECEIVED _____				
PURCHASE ORDER													
OFFICE COPY													
THIS NUMBER MUST APPEAR ON ALL INVOICES AND DRAY TICKETS													
LABELS REQUIRED: _____													
DATE: _____													
NO.: _____													
CODE	SLOT	QUANTITY ORDERED	CASES RECEIVED	REPACK UNITS	V	PALLET BLOCK TIER	PACK	SIZE	SHOW ALL CAN MARKS ON INVOICE	CASE PRICE	LABEL ALLOWANCE PER M	SMELL ALLOWANCE %	CASES DAMAGED

THE COMPUTER-GENERATED PURCHASE ORDER IS A FOUR-PART FORM. THE "CASES RECEIVED" NUMBER IS THE NUMBER USED BY THE DATA PROCESSING DEPARTMENT TO UPDATE INVENTORY.

The weekly stock status report by buyer is an evaluation of each buyer's stock movement and is run after each buyer's order. It includes all past movement figures: this week's, previous week's, the last 4-week period, previous 4-week period, and the corresponding periods last year. "Deal" is a promotional item; "Book" is the order book price, "Cost" is the actual item cost; CL (class) is the commodity coding; SEQ is reporting sequence of each by product; PER tells if the item is new or not; and "B" is the buyer.

ITEM	PR	PACK	SIZE	WEEK 4 DESCRIPTION	WEEKLY DEAL	STOCK W.T.D.	STATUS INV.	BUYER			WGT	BOOK	10/29/68				
								P.T.D	P.P.	Y.T.D.			COST	CL	SEQ	PER	B
010009				MIN DELIVERY CHRGE							000		3.00	00000	01	9	
090001				MIN DELIVERY CHRGE							000		3.00	00000	01	9	
150003				BUYING FEE		220	3,755	1,120	837	3,869	000			0	2	01	9
150045				FROZN FOOD PREPNT		83	8,013	384	290	1,240	001			0	2	01	9
492801	001			3PC CARD STR ENBLM			30				238	149.00	102.21	9	2	01	9
492827	001	3X6		ROYAL BLUE SIGN							037	35.00	24.91	9	2	01	9
492686	001	3X8		ROY BLU SIGN 3X8							095	35.00	29.25	9	20000	01	9
494989	001			STARTER ADVERT KI							019			2	99088	01	9
8	ITEMS					303	11,798	1,504	1,127	5,109	EVALUATION			3,066.30			
SALES	660	OUT OF STOCK		PERCENT													

THE STOCK STATUS REPORT BY BUYER IS RUN AFTER EACH BUYER'S ORDER.

The report serves three purposes: it is a record of movement of goods, it is a record of each buyer's inventory on hand and it is a record of the buyer's service level.

Payroll Processing

Consolidated uses its computer to print out a payroll for employes across the country. Time sheets are mailed in from Consolidated's warehouses across the country at the end of

CONSOLIDATED FOODS

every week. The documents are received at the River Grove, Ill., data processing center on Monday and are run Monday night. The checks are ready to be printed by Tuesday afternoon and are in the mail by Tuesday evening. Payroll checks are remailed via air freight, special delivery, or regular mail, depending on the area they must reach. The payroll document is somewhat complex, in that it must contain deductions required for a variety of states.

CONSOLIDATED FOODS		PAYROLL REGISTER															PERIOD	PAGE			
A	CHECK NO.	EMP. NO.	NAME	SOC. SEC. NO.	MAT. STATE	CITY	FEDERAL EXEMPT. PLAN	STATE EXEMPT. PLAN	STATE EXEMPT. PLAN	NO. OF WEEKS	RATE										
B	UNION DUES	UNIFORMS	LIFE INS.	HOSP. INS.	ACCD. INS.	DISABILITY INS.	WEEKLY INS.	STOCK DED.	BOND DED.	XMAS CLUB	SAVINGS PLAN	COMMUNITY FUND	MISC.	ADJ.	NET	YEAR TO DATE GROSS	YEAR TO DATE FICA	YEAR TO DATE STATE W/H	YEAR TO DATE CITY W/H	TRAVEL EXPENSE	
C	HOURS	OVERTIME HOURS	REGULAR EARNINGS	OVERTIME EARNINGS	GROSS	FEDERAL WITHHOLDING	F I C A	STATE WITHHOLDING	CITY WITHHOLDING	TRAVEL EXPENSE	NET	YEAR TO DATE GROSS	YEAR TO DATE FICA	YEAR TO DATE STATE W/H	YEAR TO DATE CITY W/H	TRAVEL EXPENSE					
A																					
B																					
C																					
A																					
B																					
C																					
A																					
B																					
C																					
A																					
B																					
C																					
TOTAL DEDUCTIONS																					
TOTAL CURRENT																					
TOTAL YTD																					

THE PAYROLL REGISTER IS A COMPLEX FORM, AS IT IS USED FOR EMPLOYE PAYROLL THROUGHOUT THE U. S. AND MUST INCLUDE A VARIETY OF STATE AND FEDERAL DEDUCTIONS.

RESULTS AND FUTURE PLANS

Consolidated estimates that another year will be required before its current one will have taken over nearly all of the warehousing operations for the company. Michalsen reports that inventory levels are being maintained at a more economical and realistic size and that the ultimate savings to the firm will be considerable.

