The Role of the Food Distribution Industry in Advanced Checkout Systems

IMS Experience in Advanced Checkout

Food 70's

Relates strengths and weaknesses
of Marketron Retailer System
gained through recent in-store
experiences

George Ensslin
Inventory Management Systems, Inc.
Los Angeles, California

● It is a real pleasure to appear before you today to discuss our company's experience in automatic checkout systems. As many of you know, IMS has a number of store installations of the Marketron Retailer system, and our first installation is now starting its second year of operation. Having now gone through a number of installations, we have gained experience and in the limited time available, I will try to pass along some of this experience.

1. RELIABILITY. A basic criteria that we had established early in the game was one of reliability. Our goal has been 100% reliability and to achieve this goal the on-line system is supported with an in-store backup system. Actual on-line operating experience is running at 99.97%. The backup system is more than adequate for the few times that a cable is severed or a line is destroyed by fire and both of these situations have appeared in our installations.

2. IMPORTANT IMPROVEMENTS. Our software, both from an operational and reliability standpoint has met the test of time. The software has been refined into a proven package that can withstand the assaults of even the most inexperienced front end personnel. Our itemized receipt tape for customer audit has improved customer relations and shopper surveys revealed that the majority think that the IMS checkout is faster than conventional checkouts. We have redesigned our Marketron Retailer to improve its operation. Many of you are familiar with the Marketron Retailer used by some of our earlier customers that has a row of

department keys on the left hand side. For the most part, these keys slowed down the checker imput, designed into the equipment at the insistance of some of our early retail customers, and really did not belong on the Marketron Retailer. With a computer to know from the code entry, the department, the cost and selling price of the item, there is no need to have a department key or the extra key stroke that this entails.

3. ITEM CODING. We have revised our item coding technique based on many new factors including the Universal Grocery Product Identification Code and its 7 digit structure. However, like the department key example, the operator or the computer will not be concerned with all of the 7 digits of a universal code. The computer can identify National brand items, private label items, random weight items, deals and geographic locations contained in a universal code. Input for the Marketron Retailer need only be the numbering range of the code. Tests comparing the new keyboard to the old keyboard under this code entry technique have shown a 20% improvement in checker productivity. With this increase we make no clains to be faster than an electro-mechanical cash register, we do claim that we are the equal in speed to the electro-mechanical devises.

With chain installations in both the east and west coast and others scheduled to begin shortly, we at IMS had access to many distribution center inventory files for movement analysis prior to code assignment. Our analysis

reveales some very important factors to system coding improvements in the area of dry groceries.

Case pack movement at the distribution center is readily available. We took this information and converted the case movement to customer purchase unit movement. The purpose of this conversion was to determine checkstand activity which is not by case pack, but rather by the customer's purchase unit. When we matched our warehouse case pack movement with a listing of customer purchase movement we found little similarity; for example, one of the distribution centers that cooperated with us in this analysis serves over 27% of its market. Of the leading 500 items arranged by customer purchase unit, Item 1 had an average weekly store movement of 120 units or 2-1/2 cases per week. While this item was first by customer purchase, it was far down on the list of case pack movement at the distribution center.

At the 25th item on list, the movement dropped to 35 units per week; at the 50th level to 25 units per week, at the 100th level to 17; at the 200th to 11; at 300 to 8; at 400 to 7 and at 500 to just under 6 units per store per week.

We found this same ralationship between warehouse case pack movement and customer purchase unit in other distribution centers. The movement curve for these warehoused items dropped off substantially after the first few items and and after the 500th item on the list, the customer unit purchase movement averaged 4 per day. This is a pretty significant factor when we consider that the average supermarket carries some 4000 dry grocery items, and a distribution center, several thousand more.

The information we uncovered as a result of our analysis strengthened our belief in our basic approach to code assignment under the UGPIC structure and of keying in code numbers on the Marketron Retailer keyboard. While we at IMS are all in favor of a rapid adoption of a Universal Code (UGPIC), we are not at all convinced that the introduction and use of a scanner will be the panacea many people seem to think it will be.

The 500 or so items we spoke of earlier that were arranged by customer purchase unit were produced by slightly over 140 manufacturers for warehouse distribution. Sixty of these

manufacturers were regional with their distribution in one primary marketing area. With over 60 primary marketing areas in the United States, each with many regional manufacturers, plus the multitude of direct vendor products, the task of getting all to agree to a code, while not impossible, may take longer than all of us wish to see. While some of the industry may prefer to wait for a scanner, many will choose to plug up their profit losses now with the IMS system knowing that when the day arrives the scanner can be added to those who want it, as an option to an already operating and proven system.

4. SCANNER. Those who attended the IMS show in Houston last May will recall that we publicly demonstrated before the entire industry, the first optical character reading scanner for checkout operation that read preprinted numbers on a variety of cans and packages. We also happen to think that any universal code must be human readable as well as machine readable for customer interpretation on the receipt tape. Consider also that a scanning device requires a larger computer or code converter and hence more expense at the store. We state this because our experience has shown that many benefits, both operational and financial are available today, whether or not you have a scanner.

Here is a short run through of some of the operational and financial benefits available today by departments.

5. MEAT. The retail cut code is embossed on the meat slug and this code appears on the meat label at the time of wrapping. Retail cuts of meat are entered into the system by keying the code number and the price. This information results in an exact retail meat sales picture that emerges from the computer by day of the week in relation to ad features. Analysis of this report can reduce overproduction of retail cuts that will have to be rewrapped. An improved realized gross can be accomplished by merchandising the meat case to fit the needs of the store's customers. The information can also lead to a better utilization of labor processing requirements in the meat department.

6. PRODUCE. Our experience with the electronic scales in IMS installations show immediate gains for the produce department from an accurate measurement of the weight and computer extension of price times weight. Almost overnight,

gross profit increased 5% in a store using the electronic scale in conjunction with its Marketron Retailer system. The produce item code was keyed into the Marketron Retailer as the product was being weighed on the electronic scale and the computer looked up the price, extended the price by the weight and eliminated checker price guesswork or fluctuating produce prices. All this in a fraction of a second.

PRE-PACKAGED PRODUCE that is pre-weighed is handled the same as meat. Under either method, automatic report of sales along with the balance on hand by item gives produce management information for more effective purchasing and control of produce at both the warehouse and the store.

7. H & B A - N F. These items are pre-labelled for both price and item code at the distribution center prior to delivery at the store. Code information can also be affixed at the time of repack of liquor items, and at the time of manufacture of deli and bakery products. As these items are generally higher priced than grocery items, the unit inventory control protection against understocking/overstocking becomes very important in the maximum utilization of inventory investment monies.

8. GROCERY. Under the IMS system a computer prepares pre-printed labels containing code and price information for each unit of a case pack that is to be reordered on the new automatic order system. These label strips are delivered to the store with the load or prior to the load. The pre-printed labels substitute for a price book and and can be attached to grocery products as fast or even faster than a price can be marked on an individual product. In addition, the printed code and price insure legibility and correct code entry at checkout, plus protection for the customer against the fear of overrings and for audit of her purchase. Labels remaining in the file after the order has been marked represent warehouse scratches or outs. These remaining item labels update the computer inventory on an exception basis. This procedure gives better control over inventory received at the store for accurate calculation of on hand balances. Most important, the automatic order features truck to shelf -- full case fit, and reduces labor requirements for cut, mark and stocking. Prior to receipt of the automatic order, store personnel know

exactly how many hours will be required for cut, mark and stocking. This procedure has resulted in a labor performance of 100 cases per man hour for back room cutting and marking and 33 cases per man hour for cut, mark and stocking when this function is performed on the sales floor.

9. DIRECT DELIVERY MECHANDISE. A simple entry on IMS equipment in the store for the quantity received and code number of the item not only retails all direct delivered merchandise, but results in a weekly direct delivery vendors payable report. The cost amount as shown on this report should agree with the weekly statement of vendor billings. Thousands and thousands of individual manual price extensions are now performed by the computer for a better control over inventory values and vendor payables. Benefits not only accrue to the store but upstream at headquarters accounting office in the elimination of much clerical effort as well as data processing computer runs.

10. GOING IN VS REALIZED GROSS. As the computer knows both the cost and the individual store prices for both warehouse withdrawals and direct delivery merchandise received at the store, an accurate "going in" gross can be developed in both dollars and percentages. Every price change, whether temporary or permanent, either up or down, in-store spot sales or ad losses are tracked and their effect is related to the item as well as to the commodity class. By tracking the "going in" gross and all of the changes that effect this amount, plus capturing an exact measurement of realized gross from actual ringups at the checkout, a comparison can be made between "going in" and "realized" gross profits. As the computer monitors constantly all on hand balances, floor counts are eliminated when price changes occur. Other reports that reflect this comparison between "going in" and "realized" gross by commodity class are prepared for budget purposes and highlight the item detail of a commodity group that is not pulling its weight toward the profit contribution of the store.

11 PHYSICAL INVENTORY - on demand, preferably on a cycle basis, each family group or commdodity class is printed out in a listing of an item's on hand balance. Store personnel can check a few commodity classes each day before the store opens and report any adjustments that will be used to update

inventory. Financial reports on inventory investment for balance sheet purpose and cost of sale information for profit and loss statements are readily available and the computerized checkout information for these financial reports are not only more accurate, but timely and faster.

12. CUSTOMER ACTIVITY. One of the many things that IMS equipment reveals at the store is the true state of the store's activity. IMS does not count customers by the number of times a cash drawer is opened, as in most conventional systems. The IMS method is to count customers only when cash is tended and the system has uncovered the fact that stores have fewer customers than had heretofore been reported. However, these fewer customers had larger average sales per customer. In one instance, average sale per customer increased slightly under a dollar per customer, reflecting the true state of activity at that store. Hourly readings of customer traffic can be measured by the computer and this information results in improved front end scheduling that not only gives better customer service, but reduces the expense of front end labor.

13. STORE BOOKKEEPING. Manual store bookkeeping has been eliminated and the balancing and rebalancing of register readings and taxable vs. non-taxable sales eliminated. This information is automatically reported by the computer. Checkout accountability is determined instantly at the end of the shift, over/under charges pinpointed by clerk, stamp accountability, plus coupon accountability is instantly available.

14. UNDERRINGS. In chain after chain the shopping tests that are conducted reveal an underring loss that exceeds 1% of sales. In six of what many consider to be excellently managed chains, the shopping tests revealed an average underring loss of 1.39% of sales. This loss is eliminated by the IMS system as installation tests and measurement with controlled stores have proven. The saving from this alone more than pays for the installation.

15. PROMOTIONAL MEASUREMENT. From a merchandising point of view, one of the most immediate effects of the installation of IMS equipment is in the improved and accurate measurement of the promotional effort of the store and/or chain. The effectiveness of an ad's make-up and item prices can be determined at any time by inquiry of of the real-time system. Time does not permit to relate all of the benefits - and the non capital investment - cost justification of the IMS system. However, in summary, our experience to date has resulted in outstanding reliability, proven software, efficient hardware.

16. CONCLUSION. The IMS system permits the operator to know his customers, know what they buy and then procure the merchandise his customer requires. The total IMS retail information system is designed to improve total productivity, not only at the store but upstream at the home office of the chain or distribution center. The IMS system assures the retailer that he pays for only that merchandise which actually comes in his back door and correctly charges his customers for the merchandise they take out of the front door.●