

product type, the next five the manufacturer's code, the next five the product code and finally, a digit is reserved for check sum. The digits are encoded into bars and spaces that are read by bar-code readers. There have been many advances in bar-code technology, but essentially bar-code readers first scan and decode the bars and spaces to the correct UPC digits and then transmit the information to the retail system.

POS terminals are simply computer- and communication-enabled cash registers. They are connected to the bar-code and card (debit and credit and shop loyalty cards) readers on one end for fast, error-free check-out, and on the other end, to the store retail systems for real-time price lookups and updates to the inventory. As soon as the bar-code reader scans in an item, the POS system sends a PLU (price look up) query to the database to get unit price, tax, discount, and promotion information. Thus, the exact price (including shop discounts and coupons), time of sale, and shopping-basket composition are all recorded.

11.2.4.2 Pricing and Inventory Modules

The RMS database usually consists of the following tables: inventory, products, transactions, suppliers, purchasing, promotions, goods, customers, orders, contacts, and users, as well as others related to employees, and store layouts. On the pricing and promotions side, some tasks that a typical RMS can perform are given in Table 11.9.

11.2.4.3 Electronic Data Interchange (EDI)

In many business transactions, the output from one computer application is an input to another application. For instance, a purchase order by a retailer is an order entry for a manufacturer; an availability request by a reservation system is a query to a hotel bid price server. However, the formats and structure of the data required by each application can differ considerably. In order for applications to communicate, they must adopt a common format for data interchange. EDI provides such formatting standards.

Using EDI standards, a developer can create one single EDI interface that any application can understand. This promotes a low-cost, efficient way for multiple partners to implement automated transactions. EDI allows applications to "talk" to other applications, broadcast queries across multiple partners or otherwise communicate on a "many-to-many" basis.

EDI is a global standard, governed internationally by the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) with participation by regional and national standards bodies (in the U.S., the Accredited Standards Committee (ASC)). EDI