

becomes instantly visible to many people at once. Fourth, it can provide visual alerts (by changing color or flashing) if an order is taking longer than it should.

The most important advantage to this technology, however, is that by allowing the POS to track the order from entry to completion (rather than from entry to the printing of the ticket on the cook's line) it gives management access to information they never had before, namely the amount of time it takes to complete each individual order. This makes it possible for management to effectively identify the causes of bottlenecks or items that take too long to produce to make them profitable.

There are a number of vendors available who provide POS services. Generally they will not sell software. Rather, they will provide site licenses for operators to essentially rent the software. These vendors include, but are not limited to, Micros Systems, Agilysis Hospitality (makers of InfoGenesis), Aldelo, pcAmerica, Radiant Systems (makers of Aloha), and Squirrel Systems. Be aware that customer support is not necessarily included with the cost of the site license. There are many different customer support plans available, and some are available from vendors other than the POS provider itself. Be very careful in purchasing these plans. Some limit the type and number of calls covered and others limit the time of day when calls may be placed. Be especially careful when evaluating service plans offered by a third party vendor; make sure they have a proven track record and multiple references.

TRENDS IN POS DEVELOPMENT

POS systems have developed substantially in the past few years, with the cost of hardware declining rather dramatically. The software systems themselves, through the use of platforms like Microsoft's .NET, XML, and other Web-based protocols, have become quite sophisticated and can handle essentially all of the functionality required of them. Greater ease of use is the driving force in the further development of these systems. This greater ease of use is not only important insofar as it facilitates the ability of line employees to complete their tasks more quickly and efficiently, it is important in allowing management the ability to interface with BOH systems to provide accurate (and possibly real time) assessments of costs and profitability. There will be more about this later.

There are a number of important trends, however, that bear mentioning here. First, now that credit card transactions can be processed almost instantaneously, customers expect to be able to pay with "plastic" wherever they go. There are a number of credit card processing systems available that speed this process while also guaranteeing customer confidentiality. Many restaurants have instituted curbside service to enhance their revenue streams. Wireless handheld credit card processors speed the payment function dramatically. Before investing in wireless credit card processing,

however, make sure that (1) your chosen processor is compatible with your POS, (2) you hire an IT technician who fully understands the set-up and security requirements of such devices (do NOT attempt this set-up yourself), (3) make certain your wireless routers are strong enough to reach all areas of your property, (4) carefully train your staff, and (5) have plenty of back-up equipment like battery packs and machines to replace broken or lost equipment.

The next major trend is the use of the internet in all facets of the operation. On-line ordering has become ubiquitous; allowing customers to place take-out orders via the internet eases the process for them while eliminating many of the mistakes when order-takers have to write down oral requests. It also keeps customers from getting a busy signal or being placed on hold, losing patience, and going elsewhere. The internet has also, as mentioned previously, made credit card verification almost instantaneous. Web-based applications have also greatly enhanced special services like luxury box services at concert and sporting venues. Catered events at large convention sites have also utilized Web-based applications to great effect, making it far easier and less time-consuming for guests to re-order food and beverage items.

Closely related to these Web-based applications is kiosk service. Kiosks allow guests to place their own orders directly, using the same touch screen capabilities that servers use on traditional POS systems. With customer kiosks, however, the menu and selection options must be even more intuitive and easier to use than for servers. Customers, after all, cannot be trained; they have to know how to use the system the first time, every time. Kiosks, therefore, are best suited to quick service restaurants where menus and options are very limited. This self-service technology is starting to gain popularity in fast casual settings, as well, but the same warning applies: menus and selection options must be intuitive and easy to use, otherwise the potential for incorrect orders is too high.

POS systems can also be programmed to alert management via a PDA or other handheld device when there is a problem in the restaurant. These problems can include things like employees about to enter overtime, an overabundance of unsettled checks, guests with reservations either failing to appear or waiting too long for their tables, or special needs guests on the premises.

Also to be discussed later in greater detail, is the way in which POS technology advances have made it possible for management to conduct in-depth menu and cost analyses. Data mining has become quite a bit easier and far less time-consuming. This new ability to interpret sales and expense data has made it possible for even small stand-alone operations to generate reports that used to be available only to large operations with a great deal of money to invest in information systems.

These systems were at one time available piecemeal; a POS from this purveyor, a table management system from that, an inventory management system from yet another. Recently, however, there has been an explosion in the number of enterprise management systems available to the food and beverage industry. Companies like Averro have created systems that merge all aspects of restaurant management into one package, eliminating any compatibility concerns that come with buying IS components from multiple vendors. Further, using an enterprise system eliminates the need for multiple service and support contracts saving both unit time and money. The arrival of enterprise systems for restaurants is one of the most important developments of the last few years.

POS workstations fall into two categories: purpose-built specialized units (from either POS vendors such as MICROS and Squirrel, or general-purpose hardware vendors such as IBM, Sharp and NCR), and off the shelf PCs. The former take up less space, are ruggedized for restaurant use to withstand spillage and hot and humid environments, but often cost more. PC-based units can either be standard PCs with touch-screen displays, or thin-client devices that act like a PC but have no hard drive (i.e. no moving parts). These tend to be more reliable and a little cheaper, and are nowadays equipped with enough memory that they can continue to operate in stand-alone mode if the connection is lost. They also have the advantage that if a unit fails it can be quickly replaced with a spare that, on signing in to the server, immediately adopts the prior unit's settings, quickly restoring the operation.

Be aware that POS software providers generally do not cover hardware with their customer support and service contracts. Regardless of whether the decision is made to purchase hardware and peripherals from the POS provider or general-purpose hardware providers, it is generally a good idea to purchase a hardware service plan from the manufacturer of whatever hardware is used. The proximity of workstations and peripherals to heat and moisture will cause them far more problems than normal usage would under regular circumstances. Peripherals that are often configured with a POS workstation include cash drawers, pole-mounted displays for guest visibility, check printers and magnetic-stripe card readers for settlement.

RESERVATIONS AND TABLE MANAGEMENT SYSTEMS

Reservation and table management systems have become far more than simply vehicles for knowing who is coming in or knowing which tables have been seated and which are vacant. Reservations systems have developed into databases which can be used to track the purchase habits and other important information about guests. When making reservations guests provide restaurateurs with pertinent personal information like telephone numbers and birthdays or anniversary dates. This information can not only