Wireless devices find their way tableside
By Meg McKenna

"He had to keep in mind not only the short time allowed for the actual consumption of the meal, but also the often non-existent time allowed by business men for the digestive process…"

This was said of George Auguste Escoffier in 1890, when he and his partner, Cesar Ritz, were redefining the standards of service at the Savoy Hotel in London -- as head of restaurant services and general manager, respectively. Escoffier went on to revolutionize methods of food storage, preparation and presentation. Today, restaurateurs at every level of service continue to be challenged by that same element of "often non-existent time allowed" by guests, and are looking to technology to assist a dwindling server pool to be more efficient. This article considers handheld devices loaded with point-of-sale (POS) software as one of those service enhancement tools.

A learning process
Laptop computers and handheld PCs are currently being utilized to successfully transform bedside service in hospitals. Using these devices, doctors and attendants record orders while simultaneously comparing those orders to the patient's record to identify conflicts. Errors often attributed to poor handwriting and misinterpreted directions have been dramatically reduced and pertinent data is available bedside to attendants so they can effectively provide treatment.

The same challenge exists in the restaurant industry when servers record customer orders. The need to reduce the errors and time associated with double data entry and the need for the person providing service to have the most up-to-the-minute information possible, are drivers for restaurant operators to consider handheld technology. Fixed POS devices linked to station printers effectively reduce kitchen errors resulting from poor handwriting or orders given to the kitchen verbally. Although this set-up solves problems in the kitchen, the servers on the floor continue to do double entry when recording customer orders on a guest pad tableside -- then re-entering the same order into a fixed POS device (a device that they often have to share with several other servers.)

Enter the wireless handheld POS
Wireless handheld computers may take the form of a tablet PC or clamshell, and increasingly incorporate smart phone elements. Input can be keyboard-based, pen-based or both. In addition, there is a potential on the horizon for voice-based input. Wireless POS is a component of wireless telemetry, which is defined by machine-to-machine correspondence. The machines communicate over wireless local area networks, which may ride on established local area networks. Wireless data networks are enhancing efficiency and revenues throughout the service industries through applications in hospitals, hotels, casinos, car rental agencies, taxis and airports, by allowing operators to take solutions to their customers without the hassle, expense and construction involved in running wires to fixed transaction devices. Restaurants are quickly coming on board, as well, with mission critical applications such as point of sale processes. Tableside order entry can often be combined with credit card settlement, table management and inventory control applications to allow operators to abandon the single function POS terminal and replace it with points of service that link core systems and improve customer service as well as overall organizational efficiency.

Enhancements to PocketPC operating systems introduced by market leaders Palm and Microsoft, combined with device enhancements by manufacturers such as HP/Compaq, Toshiba, Symbol and Motorola, have made the PocketPC a viable extension of an enterprise IT infrastructure and a platform suitable for mission critical business applications. The acceptance of personal digital appliances (PDAs) into mainstream use makes them a familiar interface to servers and managers alike, and therefore introduces few training and implementation issues beyond a basic introduction. Future sales of PDAs, as projected by Gartner, expand exponentially in the next five years, which

will impact the price point of each device as well as the acceptance of these devices in a restaurant service environment by both servers and customers.

Worldwide Mobile Terminal Device Sales to End Users (in thousands of units)						
	2001	2002	2003E	2004E	2005E	2006E
Smart Phones	1,284.9	4,717.6	10,129.1	24,043.9	40,793.6	54,337.0
Wireless PDAs	2,241.7	5,318.7	11,774.2	17,899.3	23,021.3	27,809.1
Other	398,017.3	430,856.5	458,150.8	465,511.7	481,553.6	494,268.2
Total	401,543.9	440,892.8	480,054.1	507,254.9	545,368.5	576,214.3

Source: Gartner Dataquest

Who are the players bringing solutions to this market? The handheld comparison chart accompanying this report considers 11 software solution providers currently deploying POS applications on handheld devices. Some have taken the approach of duplicating the server interface of their fixed POS solution on a handheld device, and others have developed a unique interface that leverages elements inherent in the handheld platform such as handwriting recognition, image storage and sound cards. Regardless of the interface, restaurateurs who have adopted this technology are realizing benefits that may be increasing tableside server efficiency by up to 30 percent, improving the accuracy in charges to the guest, and providing managers with a valuable tool for table management.

Wireless handheld technology in action
Wagamama, a popular noodle restaurant in Great Britain, recently implemented GEAC System's handheld software on the Comaq iPAQ PocketPC 2002 device to speed up the entire ordering process. At Wagamama locations, customers can see an image of the food they are ordering and view the ingredients of the meal that they are about to eat on the server's handheld.

Managers at Mrs. K's Tollhouse in Maryland have been using ASI's (Action Systems Inc.'s) Restaurant Manager system on Compaq iPAQ for more than a year, and recognize the increase in average check as one of the most impressive benefits since implementing the system. The increase is a result of the handheld software reminding servers at the appropriate points to offer customers side orders, specials of the day and available desserts. Additionally, since each server is equipped with a handheld, it allows them to remain on the floor at all times. On shifts where runners are in place, the number of servers on the floor can be reduced as each server can attend to more tables.

Additional benefits to servers through utilization of most solutions include:

- Increased total time on the floor
- A personal POS device and one time data entry
- Immediate notification of 86'd items and menu substitutions
- Table status immediately apparent
- Tableside settlement of credit cards in some solutions
- Local or remote printing of customer receipts
- Full check splitting, hold and fire capability and seat assignment functionality.

Feedback from servers utilizing these devices tableside has been positive: the learning curve is short, table turns are up and they are equipped with up-to-the-minute information to serve each table. Customers appreciate tableside credit card settlement when it is available as their credit card never leaves their sight and is not opened to some of the scams that exist in the marketplace.

Smokies Stadium in Knoxville, Tenn., faces the type of challenges that are inherent in stadium foodservice operations due to the wide array of service styles, venues and centralized preparation facilities. Initially, to address the challenge of service to the luxury boxes, Randy Young, suites coordinator, tested and implemented the Wireless Waitress Solution from Computer Resource Group built around Palm Technology. The Palm application works with the restaurant's existing computer system to coordinate orders coming in from multiple locations, control inventory, coordinate seating

and take credit-card payments. It will be rolled out to the remainder of the stadium venues this season.

While restaurant managers can use their wireless devices to process orders, most realize the benefits of a handheld to access the reporting and analytical functions of their POS or restaurant management systems. That functionality may include:

- Full restaurant management through interfaces to inventory and reservation systems
- Improved table management through viewing of all server open orders
- Stock control/menu item count down
- Improved check control
- Analysis and reporting
- Real time server auditing
- Wireless alerts
- Access to Internet or intranet applications.

Addressing the critics

There are still resistant points to deploying wireless solutions tableside. Image is a factor that is key to the culture of most restaurant operations. Some restaurateurs feel that bringing technology right to the customer's table is intrusive and that it should remain behind the scenes. Furthermore, the per unit cost for each handheld device, while usually less than a fixed device, is still high for some operators to allocate to each server. The durability of the handheld systems is another issue of concern. While some devices have been ruggedized to meet a four-foot drop test and to withstand a brief shower -- some perceive the challenge of the restaurant environment, with its quick pace, wet spots and presence of grease, to be unfriendly to the introduction of such a device. Additionally, tableside order entry is most efficient with a server/food runner style of service, which is not prevalent in all operations.

Tableside order entry is not coming into the market at a revolutionary pace, but it is proving to be a meaningful technology for many restaurateurs. As the enclosed matrix indicates, the number of solution providers is growing. Also, the functionality and stability of these systems is improving and the hardware platforms are becoming more and more durable.

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