



# SERVING LARGE HELPINGS OF TECHNOLOGY!



Imagine being invited to a nearby restaurant via SMS, choosing from a digital menu card, directly placing an order through a touch screen kiosk and being served by a robotic bartender! Welcome to the tech-savvy restaurant of tomorrow where you are sure to be served in style with hi-tech gadgets and sophisticated systems.

**Y**our friendly neighbourhood restaurant may soon don a different look thanks to technology. Waiters may no longer scribble your order on paper but use a handheld device to directly send your order to the kitchen. You will get to choose your dish on a digital menu card that describes and displays its image as well. Technology is soon becoming a staple diet for restaurants that want to serve their patrons better.

Technology can not only enhance the customer experience by ensuring speedy service, but also enable restaurant owners to improve their business efficiency. Moving beyond software applications tailor-made for restaurants, restaurants in the US and several European nations are ready to invest thousands of dollars to install hi-tech gadgets in the field of biometrics, wireless devices, etc. In India, too, the presence of technology can be seen in neighbourhood coffee shops and restaurants. Wi-fi hot spots are getting as common as restaurant employees using handheld devices to take orders.

## Wi-fi ambience

The latest addition on the menu is free Wi-fi connectivity for patrons like Nimit who carry their laptops everywhere they go. "I often sit with a cup of my favourite coffee, while connected to my work through good Internet connectivity provided in

these coffee shops. This is very convenient—after all, great ideas come with a cup of coffee," he says. Nimit is a software professional and a regular at coffee shops. Of course, "cyber cafes" have offered Internet access for several years, but typically, not for free. As wireless becomes more affordable, other eating-and-drinking establishments will join the bandwagon of providing free wireless service to customers.

In India, Wi-fi hotspots are fast mushrooming in towns and cities. According to [www.jiwire.com](http://www.jiwire.com), there are over 150 restaurants and coffee shops (excluding hotels) that are Wi-fi enabled. The hotel industry of India was quick to set up 802.11b wireless hotspots as wireless LAN (WLAN) and Internet access brings in more guests. Wireless access is one of the deciding factors when choosing the hotel for today's executives or businessmen.

Taking a step further, fast food giant McDonalds has taken ambience enhancement very seriously. It has introduced wireless networking, PlayStation 2 video games consoles, Internet terminals, flat screen televisions and music videos into its revamped restaurants to serve customers in style.

### Order wirelessly!

Did you notice that small mobile-sized object that your waiter was punching on, while you placed your order? It's the new age wireless PDA that has replaced the order booklet in most leading coffee shops, pizza restaurants and hotels. India's largest coffee conglomerate, Café Coffee Day, has introduced the wireless-enabled palmtop device, Nurit 8010 that stewards use to communicate with the production staff behind the counter, directly.

"Nurit 8010 is inbuilt with a thermal printer, CDMA modem, smart card reader, and credit card swipe slots. It is a multipurpose device," explains Sivaprasad N V, GM—Information Systems, Café Coffee Day (CCD). A steward takes the order on the handheld, following which the order is instantaneously registered and printed at a computer near the counter. This is for the production staff to prepare the order. Sivaprasad adds, "The steward gets a notification on his handheld as

soon as the order is ready to be served. There is no delay even in billing, as the steward can generate the bill on the spot, on his palmtop. This device has improved order execution and transaction time by about one-third." The waiter can also set a priority level on every item ordered. For example, if the coffee is to be served after the food, food gets higher priority.

"Apart from this, we are using the palmtop for a customer loyalty program. A smart card is provided to customers, which contains all the details regarding their preferences. When the PDA reads the smart card, the steward can provide more personalised service, and the back-end staff can also keep track of the transaction history of that customer," adds Sivaprasad. Another advantage of this system is that every order, from all the outlets in India, is tracked at the Bangalore head office. So CCD can monitor supply and demand, performance and review allocation of manpower. Such wireless devices reduce wait times, increase table turns and enable restaurant operators to increase revenue and efficiency.

### Cashless payment

Payment by credit card is a common practice for most, but how wary have you been when your card goes out of sight to be swiped at the counter away from your table? You can feel more at rest now with the mobile credit card processing equipment or mobile point-of-sales (POS) devices that process your card, right at your table.

Till now, merchant establishments processed credit card payments by swiping customers' credit cards in a slot in the POS terminal, which is traditionally connected to a bank's Network Access Controller (NAC) through a dedicated PSTN connection. The NAC then directs the information contained on the credit card

to the bank's data centre, through its own network. With the wireless POS, a transaction will now be directly processed at the bank's data centre, by skipping the PSTN connection and the NAC infrastructure.

GPRS is the next-generation wireless for merchants and offers greater coverage area. GPRS works with a SIM chip like the one on your mobile phone, and the merchant can "roam" at no additional cost on all the GPRS carriers. Bluetooth is also emerging as a viable option here.

### Biometrics makes an appearance

After successful implementation in the supermarkets, biometric payment systems are being pilot-tested in several fast-food restaurants in the US. The most obvious advantage is that it's fast and secure. It can be used for attendance management of employees, as well as provide alternate secure payment options to the customers.

A steward takes the order on a PDA



Biometrics eliminates chances of proxy attendance or unauthorised entrance. Fingerprint identification is unique for every employee. This way, it offers a more secure environment by allowing restaurant management to know who is on the terminals at any given time. Biometrics can also be a boon for customers. Customers can set up an account with the restaurant by registering their fingerprint scan. Once registered, a customer's finger image is stored and used for secure payment transfers at any participating POS (point of sale). The cashiers will no longer need to see identification or get a signed credit card slip, because the scanned image is almost fraud-proof identification.

Ravi Venkatesh, CEO, iPower Solutions India Limited, is optimistic of its adoption. "The move towards contactless payments has already begun. Mobile phone manufacturer, Nokia, for example, has released a shell for its series 3220 mobile phone, which will enable consumers to use the handset for making contactless payments. Restaurant interest in biometric fingerprinting technology is increasing as scanners decline in price—some sell as low as \$100. The fingerprint scanners are compatible with most point-of-sale terminals," he adds.

## Computer-driven kitchen

Ensuring quality and consistency of its food products is of utmost importance for any fast food joint. As orders for burgers and fries pile up every minute, it becomes essential to store the ingredients under proper conditions till served. One solution is a computer-driven kitchen that is designed to serve hotter, fresher, more consistent food products than ever before.

America's reputed fast food chain, Burger King, has installed one such computer-driven kitchen equipment that consists of "holding cabinets" that are programmed to keep the contents fresh. These sophisticated cabinets hold cooked, unfinished food as it waits to be assembled into sandwiches. Settings, such as holding times, type of product, cook time, etc. are strictly monitored to ensure that the various food items held in each slot stay fresh. Cabinet slots are usually reprogrammed once a month by the restaurant manager or district



Motoman RoboBar at work

manager. If cabinets are not programmed properly, food quality and restaurant productivity can suffer. The slots are programmed using a handheld application that simplifies the human interface with kitchen equipment, making it easier for restaurant managers and crew to set kitchen equipment properly.

## Robotic bartenders

Industrial robot maker, Motoman, has come out with a robotic bartender called RoboBar. With two arms, a video screen for a face, and dressed to the nines in a tuxedo—RoboBar is a robot bartender. This is an ideal employee that can work 24 hours a day, seven days a week, that won't call in sick and won't complain about tips. The company believes this invention can save bar and restaurant owners significant amounts of money on inventory.

RoboBar features a UPJ dual-arm robot with a compact NXC100 controller housed in the base of the robot. Each of the two manipulator arms on this unique robot have five axes of motion, and the base also rotates to provide an eleventh axis of motion. The end-of-arm tooling consists of simple parallel grippers to hold cups and bottles. The RoboBar greets you (based on whether you choose to have a man or a woman serve you) from a face displayed on an LCD screen, where the robot's head ought to have been. To get a drink from your robotic server, you first have to swipe a card which helps ensure you're 21. The customer uses a touch screen to choose a beverage. After that, the RoboBar goes to work, all the while telling you jokes

and talking to you to keep you entertained. It selects a cup, fills it with the appropriate beverages and ice. The robot then passes the drink to you via an automatic turntable located at the side of the cell.

This product has received mixed reactions. While some agree that places like airports, corporate bars and, maybe, some theme restaurants could benefit from RoboBar, a majority feel it just won't work. Without human interaction, mixing the drink just the way one likes it wouldn't be possible. And after all, it can't listen to your troubles or offer you a drink on the house—at least, not yet.

## Kiosks make an impact

Waiting in long queues to place orders for a take away or dine-in is a common sight in most fast-food joints. But this too can change with touch-screen kiosks that are easy to operate. Customers in a self-service restaurant can easily use it to place their order and make instant payment using a credit or ATM card. This way the staff only has to concentrate on preparing the order without the interruption of taking orders and fulfilling them at the same time.

"Though kiosks haven't proliferated in the hospitality industry in India, it is widely in use in restaurants worldwide," says Pradeep Natarajan, president & CEO, Riva Logic Technologies Pvt Ltd. "Touch screen kiosks are used for placing home delivery orders and for takeaway food packets. They are also widely used as Point of Sales (POS) kiosks for managing orders by the restaurant. Kiosks are also used for user/customer feedback, displaying contests, special promotions and managing royalty programs," he adds.

Entertainment kiosks are becoming a rage nowadays. Café Coffee Day has installed Q Jam, a kiosk that plays the customer's favourite songs at the outlet. Sivaprasad, tells us how the customer can 'order' his favourite song. "One needs to purchase a card for Rs 5 only. Just scratch it and enter the number and you can play all kinds of songs ranging from Western classical, pop, Bollywood hits, to folk albums etc." he says. In Pune, Rivalogic has installed a touchscreen kiosk in one of the biggest franchisee chains of fast foods. Natarajan



Selecting a song on an entertainment kiosk adds to the experience of eating out

explains, "It is being done on an experimental basis. Here the kiosk is used to have interactive e-branded games for kids. The child is awarded with coupons and special branded merchandise. The coupons also result in higher sales for the restaurant."

Elsewhere, the global fast food chain, Burger King, has introduced the multimedia experience for its customers through kiosks. Thanks to the new digital menu board, guests receive product information and prices through a combination of video, moving product images and animated texts of unique high-resolution quality.

## Predictive technology

In the fast food world, estimating the demand for food is critical. Underestimate demand and long-waiting customers go elsewhere. Overestimate, and you are likely to waste a lot of food. Technology comes to the rescue in the form of a system that predicts the volume of orders.

HyperActive Technologies, a Pittsburgh start-up, is working on developing a system called HyperActive Bob, which can make restaurants smarter by estimating how much food will be ordered in the next five minutes. The system can't yet read customers' minds,

but its cameras mounted on the restaurant roof do estimate how many probable customers are approaching. Grill cooks view a basic computer interface that tells them how much to cook and when. Then, when an order is actually placed, the high-volume items go right off the grill and to the customer, bypassing the long waits—so customers receive fresh, hot food.

Employees no longer spend their time figuring out what to cook and when. Instead, HyperActive Bob does the "figuring out" while employees concentrate on food preparation. The 'predictions' offered by HyperActive Bob focus strictly on volume. Besides counting cars, HyperActive Bob also monitors queues at the counter, tracks the time when cooks start orders and how long burger patties sit before being served. If successful, it can be a boon for the drive-in restaurants in the near future.

## Food for thought

Technology throws up unimaginable possibilities in the hospitality industry. In India, restaurant owners have, till now, been slow in embracing technology. The IT industry is trying to educate and tell them that their plate is full of options that promise to deliver faster information, and quicker and more hygienic service to their customers. Technology, served in style, is the order of the day.



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## Tech Bites

What's cooking in  
your old PC?