A Better Way to PAY in Restaurants

ON THE SPOT wireless and IP-enabled payment solutions are transforming payment at the point of service in restaurant and hospitality businesses. Card security, lower cost card processing and server efficiency put payment on the table, at the car, and for delivery.

VeriFone
THE WAY TO PAY™

Introduction

The hospitality industry covers a broad range of businesses aimed at providing service to customers seeking food, beverage and lodging. Cafes, restaurants, bars, hotels and resorts all focus on providing comfort, service, speed and convenience to the point of service. Increasingly, these businesses are reliant on credit and debit card acceptance.

Hospitality businesses typically utilize a cash register or standalone POS terminal or system in a fixed location at cashier stations or takeout registers. Wireless and broadband technology now makes card payment acceptance feasible at the point of service--at the table, at the car, or for delivery. This white paper examines how new payment systems and processes will revolutionize speed of service, improve guest experience, and open up new revenue possibilities.

Restaurants and other hospitality businesses were among the earliest adopters of standard forms of credit card payment. Now, other industries — such as quick serve restaurants, grocery stores and even convenience stores — have leaped ahead with adoption of new card acceptance systems and processes that are more adaptable to changing consumer needs.

Today's hospitality business typically utilizes a cash register or standalone POS terminal in a fixed location—a payment process that is well suited to takeout counters and cashier-centric points of service, but does not accommodate payment at the table, poolside or for takeaway service at the curb or at the customers' doorstep. In the fixed POS model, every card transaction requires multiple steps for the guest and staff to complete.

Businesses can improve efficiencies, protect customers from identity theft, and increase profits with payment acceptance ON THE SPOT, or at the point of service, even in full-service establishments.

The Changing Face of Payment

Consumers continue to shift away from cash to electronic payments at a rapid pace. In recent years they have also shifted most transactions to debit cards, and they are increasingly comfortable using PIN debit across many different industries, from the gas pump, to grocery store, convenience store, and even high-end specialty retailers.

Large merchants and consumer and privacy advocates are also encouraging the shift to PIN-based debit in the belief that not only is it less costly to the merchant than credit and "signature debit," cards, but that it also is safer and presents less opportunity for fraud. According to a recent study by Moore & Symons, Inc., 60% of consumers are concerned about safety of the current card payment process in table service restaurants.

The 2005/2006 Study of Consumer Payment Preferences study by Dove Consulting and the American Bankers Association found that consumers in 2005 used debit cards for one-third of in-store purchases, greater than the 19 percent cited for credit card purchases. Financial Insights, a market research firm, predicts the number of PIN debit card transactions will overtake signature debit cards by the end of 2009. Despite increasing reliance on debit, many hospitality businesses are unprepared to accommodate a shift to PIN debit and are also unable to capitalize on the lower transaction costs due to the current payment infrastructure. In a 40-table setting, for example, if the proprietor can shift 30% of his 240 daily table-turns to PIN debit, he could save $36,000 in interchange fees annually.

Multiple Points of Service

Full-service restaurants, with traditional stationary POS systems, have been unable to experience the benefit of reduced interchange rates for PIN debit since their POS equipment does not meet the needs for PIN entry at the table and carside drive-up.

As consumers grow increasingly weary about card security, full-service restaurants are looking for ways to securely accept payment at the point of service. New secure portable payment solutions break through this barrier, increasing speed of payment settlement, improving customer service, and eliminating the possibility of card skimming—a

growing crime in which information is captured (or "skimmed") from a credit card's magnetic stripe by running it through a small capture device.

TablePAY – VeriFone's pay-at- the-table service now offers restaurant operators the ability to revolutionize restaurant operations by:

- Improving customer service through reduced wait time for tables and check payment
- Increasing table turns, increasing capacity and ultimately increasing restaurant profits
- Offering multiple payment options including PIN debit
- Reducing fraud and alleviating consumer fears of identity theft

Today, in a table service setting, there typically are eight steps required to handle a credit card transaction:

1. Customer asks for check
2. Server brings check and leaves
3. Server comes back to table to pick up credit card
4. Server takes card back to POS system for initial transaction — without tip
5. Server returns to table with check and card
6. Customer calculates tip amount, then adds up total, and signs receipt
7. Server returns to table to pick up check
8. Server or manager edits tip in the POS system

Putting payment at the table reduces that process to three steps:

1. Customer asks for check and opts to pay with plastic
2. Server brings payment system to the table, pulls up the correct guest check, and leaves system with the customer to complete the transaction, including automated tip calculation options, and automatic receipt printing
3. Server picks up terminal and receipt

The productivity savings are tremendous. In the table service setting, wait time to finalize the payment process is reduced, and table turns are increased, resulting in greater customer satisfaction and improved profitability. For the consumer, the fact that their card never leaves their site, or even their own hand, alleviates fears about identity theft.

CarsidePAY — Many full-service restaurant operators have reported that takeout represents an increasing proportion of their total sales compared to two years ago. In fact, according to the National Restaurant Association, 44 percent of table service-restaurant operators anticipate that takeout will represent a larger proportion of their total sales in 2006, and 34 percent of adults say purchasing takeout food is essential to the way they live.

Restaurants are now offering a new form of takeout service — carside pickup — and VeriFone has responded with CarsidePAY, in which payment systems are carried to the consumer's car door along with the food order. According to the National Restaurant Association, more than half of all adults surveyed — and more than 70% of those aged 18 to 34 — said they would likely use carside pickup if their favorite full-service restaurant offered the option.

Speeding-up takeout orders increases customer satisfaction and restaurant revenue, but the reliance on fixed POS systems has slowed efficiency. Cutting the reliance on hard-wired POS systems for payment authorizations by using Wi-Fi and even cellular enabled payment systems makes it possible for servers to bring out the food, present the check and process the payment all in one trip. That speeds up payment, reduces wait time and reduces curbside carside traffic congestion during peak periods.

By bringing payment to the point of service with both TablePay and CarsidePAY, restaurants can take full advantage of PIN debit interchange rates to increase their profitability. A Federal Reserve report noted that a PIN debit card transaction of $40 generates an interchange fee of $0.34, compared to $0.57 for signature debit and $0.72 for credit cards. On an $80 purchase the PIN-based debit fee is just $0.44, while that for signature debit soars to about $0.99 and credit card to $1.33.

Purpose Inspired Design

When there's no apparent business case for investing in a new market, solution providers will try to meet early demand by retrofitting existing products. Thus, the first wireless POS terminals were adapted from existing fixed terminal designs and retrofitted with wireless modems

and batteries. Those types of systems are not well suited for restaurant use, where servers need to be able to keep their hands free to hold plates and trays and want to be able to move nimbly without heavy, bulky equipment slowing them down. The software interfaces on these devices are merchant-focused and not attuned to the consumer, who is an occasional user and can't be expected to "learn" how to manipulate a payment device every time he or she goes out to dinner. Therefore, the software interface has to be completely intuitive because consumers cannot be expected to learn complex processes and software prompts.

VeriFone set out to design a customer-facing portable payment solution driven by the needs of the hospitality market. This "Purpose Inspired Design" effort started with a rigorous investigation into usage scenarios to determine what the hospitality market needs to make portable payment work. VeriFone consulted in different geographies with numerous design partners and utilized workflow analysis and focus groups to design a fully-functional payment system that wait staff will want to use, merchants will be eager to exploit, and consumers will embrace.

In reviewing the research, it became clear that a payment system designed for hospitality environments use would have to meet the following requirements:

- **Environmental robustness** – In the hectic environment of table food service and carside take-out, handheld devices will be dropped, spilled upon, and heavily used. Therefore, they need to withstand the impact and recover gracefully; they also need to be resistant to moisture from food and beverage spills.

- **Ergonomic** – The device must be very small, extremely light, comfortable to hold and use, and easily placed into a holster and charging base so that servers have their hands free to wait on tables.

- **Consumer-friendly** – In the past, payment systems were always *merchant*-activated. That's no longer the case. Consumers are increasingly paying with PIN debit cards and gift cards, and using payment systems where they swipe

their own card, enter PINs, and sign on electronic displays. This requires a large screen that is easy to read and a simple application flow that is easy for the consumer to follow, but with enough detail to guide them effortlessly through the transaction.

- **Security and privacy** – Consumers are also becoming increasingly wary about the possibility of account theft, or "card-skimming" when handing over plastic to a stranger, particularly in a restaurant environment where the card often leaves their sight for several minutes.

- **Workflow efficient** – The payment system for pay at the table needs to be easily located for sharing, easy to carry and present, reliably slip into a charging base without attaching cables, and must have an integrated printer to minimize the number of steps required to complete a payment transaction.

MAXui Design for Extreme Usability

VeriFone's research into purpose driven usability prompted creation of a new development process known as MAXui, which maximizes the user interface over the given surface of the product, while hiding areas which do not contribute to the frequent experience of the device. The MAXui effort focused not only on making a table server's job more efficient, but on being intuitively useful to consumers who can readily swipe or insert their own cards, enter PINs, and even add tip amounts to complete the transaction. The result was VeriFone's V^x 670 — the smallest and lightest fully integrated handheld payment device in the industry, weighing less than 1lb and measuring just 168mm by 78mm but providing a *larger* screen — 128 by 128 pixels — that allows more consumer-driven functions to be displayed and eliminates scrolling.

High "viewability" and high usability were primary design requirements. In addition to a high-contrast, white backlit display, the large, ATM-style keyboard was designed with a blue backlight that shines through each key to ensure ease of viewing and operation in subdued lighting conditions. The keys utilize the same technology as

cell phones to provide a tactile response with which consumers will be very familiar.

The rugged V^{x} 670 is ideal for virtually any mobile payment application and is highly suited for any environment, with a rugged case that is impact-resistant and spill-resistant to endure the most demanding conditions. Featuring a tapered design and ergonomically balanced midpoint, the V^{x} 670 is easy to use while in hand or on the table, and it fits into a holster for easy transport from base station to the point of service.

The MAXui design includes a rear-loading printer that tucks neatly and efficiently underneath the display, maximizing the user interface so operators and consumers see only the uncluttered display and keypad. The quiet, fast thermal printer accommodates a large 40 mm diameter paper roll with trouble-free, drop-in clam shell loading, rear paper exit that provides excellent spill protection, and a dual-tear bar so receipts can be ripped in either direction.

Serving Up POS to Consumers

The American consumer increasingly demands more control over the payment process. This partly reflects concerns over card security and a change in mindset that is particularly evident with the proliferation of self-checkout lanes at grocery stores and home improvement stores.

Increasing incidents of card skimming in restaurants and continuing concerns over identity theft have heightened consumer awareness over the growing risks associated with handing over possession of their card. Increasingly, consumers much prefer to keep their card in sight, rather than watch a waiter stroll off with it to a workstation for an interminable period. Such anxiety is removed when the consumer can hold on to his card during the entire payment transaction.

To leverage this momentum behind self-pay models, the user experience must be pleasant and effortless to ensure that the clerk can complete the transaction with little to no intervention in the shortest period of time. To accomplish, this application User Interface (UI) must be designed in a manner that takes a holistic view of the dining

experience, blended with knowledge of the consumer's mindset and level of technical expertise.

Current restaurant payment solutions are designed with a UI targeted for a merchant-facing audience. The prompting sequence is more suitable for someone who utilizes the payment terminal routinely, not necessarily the casual customer. Consumers, on the other hand, have less experience with such devices and a cumbersome interface would only serve to confuse them resulting in a poor dining experience.

Building on years of experience with customer-activated payment solutions, VeriFone designed a restaurant payment application to use only the most necessary menu items to prompt the payment and to allow plain language prompts. The goal was to create a user interface that is both easy to understand for the consumer, and quick for the server to navigate. The key design attributes were for an application with a continuous flow designed to accomplish completion of the payment transaction easily, simply and quickly.

VeriFone's ServPOS solution is focused on delivering the simplicity the consumer requires with enough detail to guide them effortlessly through the transaction. These very aspects will improve the level of service, while providing a sense of time management to the consumer and also increasing the merchant's table turns.

The ServPOS solution is comprised of two components: a terminal application and a middleware translation layer.

The ServPOS application is solely focused on providing a simplified and efficient user interface for the pay-at-the-table environment. ServPOS is designed in such a manner that does not assume whether the wait staff or customer will complete a majority of the transactions. There is only one interface and it will be equally efficient for all parties.

The ServPOS middleware acts as an API translation tool between the UI and payment engine. This facilitates simple integration to any payment engine without requiring modifications to the payment UI.

Payment Engine Integration

The payment engine serves as the authorization/settlement manager between payment entry (via ServPOS application) and the payment processor. The type of payment engine is determined by the market to be addressed and three methods of deployment make it suitable for just about any restaurant environment: stand-alone use, hosted managed services and integration with restaurant management systems (RMS).

Stand-alone Mode -- Smaller locations with one-to-four V^{x} 670 systems may choose to operate in stand-alone mode, with each system using GPRS communications, or Wi-Fi, to communicate directly with a transaction processor.

Managed Services Mode – With payment hosted on a gateway and accessed through a portal, this option provides restaurants with many of the advantages of integrated systems without having to invest in a RMS. Transaction information is stored on a remote IP gateway, while any V^{x} 670 in a particular restaurant can initiate or complete a transaction. Batch closing can be pre-programmed on the gateway, which also provides sophisticated reporting functions and transaction history that can be reviewed from any PC with Internet access. In addition, completing tip capture at the point of service saves time at the end of the shift, as no adjustments are required.

RMS Integrated Mode – The V^{x} 670 and ServPOS applications integrates seamlessly with enterprise restaurant management systems that provide table seating and ordering management in addition to back office management tools. ServPOS software appears to the system as an additional peripheral attached to the ordering/payment system. ServPOS allows for retrieval and printing of line item ticket reports, which provide the consumer the capability to match the details of their order with the total bill. The ServPOS UI provides quick confirmation to the consumer as to the correct check number and total amount of the transaction.

The Usability and Security Equation

In this day and age, style and functionality will only go so far. When it comes to electronic payment, security and confidence are essential — both from businesses deploying the systems and services, and consumers who are handing over their cards.

In size and style, the V^{x} 670 is similar and only slightly larger than today's Personal Digital Assistants (PDAs). But that's where the comparison stops. While some restaurants have looked into using PDA-type solutions for remote order taking, these devices and their usage models fail to deliver on the key benefits of secure payment at the point of service. These were not designed to be used by customers or left at the table, and they do not have integrated support for PIN debit or receipt printing.

Many restaurants will be using Wi-Fi networks to operate multiple types of electronic devices, such as hand-held order-entry systems. This requires an additional layer of security to ensure non-authorized device cannot access the network to intercept payment data from POS devices.

The V^{x} 670 uses the Wi-Fi Protected Access (WPA), a standard created by The Wi-Fi Alliance to ensure secure network access. In addition, the V^{x} 670 is fully compliant with PCI standards, which among other safeguards ensures a tamper resistant design so that in the event a system was stolen the thief would not be able to access the WPA key. Due to their reliance on open system software and development tools, and lack of hardware-based security, today's PDA ordering devices are simply not capable of achieving the PCI PED approval required by Visa and MasterCard.

If the environment allows, VeriFone's commercial-strength SSL module can be leveraged to provide an end-to-end layer of security to the payment host. Furthermore, VeriFone employs its VeriShield architecture to ensure that rogue applications cannot be loaded onto the device.

Deployment Considerations

Once a restaurant decides to adopt new wireless payment devices for payment at the table, the question becomes how many to deploy for

maximum productivity and return on investment. Of course, every restaurant is going to be different, with varying rates of table turn and varying rates of normal and busy traffic, so VeriFone evaluated different usage models based on different restaurant types and system capabilities.

As the devices will be left at the table for the consumer to complete the transaction, restaurants will need to ensure they have enough devices on hand to allow waiters to handle more than one table at a time. In some cases, restaurants may be able to accommodate two or three servers with one device based on light traffic flow. In others, restaurants with higher traffic may need as many as two devices per server to ensure maximum table turns. The following grid provides an initial guide for sizing up the needs of an establishment.

	Low Table Turn Device: Server Ratio	**High Table Turn Device: Server Ratio**
Low Table/Server Ratio	1:2 or 1:3 1:1 or 1:2	1:1 or 1:2 1:1 or 3:2
High Table/Server Ratio	1:1 or 1:2 1:1 or 3:2	1:1 or 3:2 3:2 or 2:1
Green = Normal Period Red = Busy Period		

When managing multiple devices among multiple servers, restaurants need to ensure that a particular server can utilize different devices and different charging stations. VeriFone designed a charging base that provides a central station for such sharing and ensures continual charging while the device is docked. The base also functions as a convenient visual anchor point so the server staff can quickly see where to return a payment system.

The wireless LAN and wireless cellular technologies used by VeriFone devices enable any system to use any base within a particular restaurant. VeriFone systems use either Wi-Fi to communicate to a shared access point, or cellular GPRS to communicate to a cellular transmitter. The V^{x} 670 base includes a charging port for an extra battery. Optional USB ports are also available on the base for connecting supported peripherals, along with a dial modem port.

The VeriFone Difference

From the table to the counter to the car to the front door, VeriFone has a solution to fit any hospitality payment need. VeriFone's ON THE SPOT solutions for hospitality combine VeriFone's V^x 670 with advanced ServPOS software to make it simple to use. Whether your needs and preferences are wired or wireless, countertop or portable, there is an easy to use connectivity technology available to address every hospitality POS environment, from pay at the table to takeout to delivery.