Make Paying at the Restaurant Pay Off

Wireless payment technology is set to revolutionize restaurant payment transactions. The latest handheld payment systems make paying at the table, at the car, or for delivery a reality and increase restaurant productivity and throughput.

VeriFone
THE WAY TO PAY™

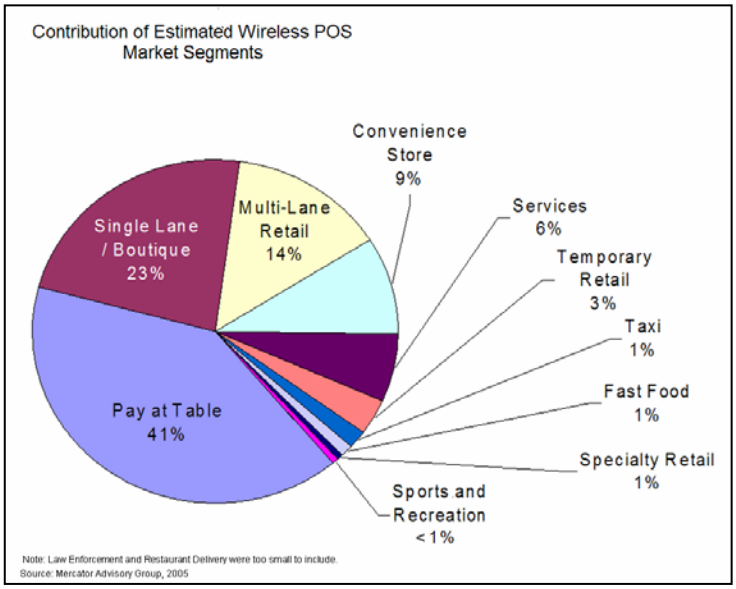
Introduction

Card payment acceptance in restaurants is moving from the stationary countertop station to the point of service: at the table, at the driver's window during takeaway pick-ups, and in delivery to the customer's home or office. Wireless technology is unshackling conventional practices that once made card payment a time-consuming drag on server productivity and a strain on customer patience. This white paper examines how new payment systems and new processes will revolutionize speed of service, table turns and cut wait times dramatically.

Dramatic Impact of Wireless on the Restaurant Market

In a typical restaurant setting today, a cash register or standalone POS terminal sits in a fixed location. Every credit and debit card transaction requires multiple steps to complete, with customers first waiting to receive their check, handing over a card, waiting for it to be taken to a counter or backroom, and finally being handed a receipt to sign.

The increasingly popular takeaway service is an inherently mobile function that today is hampered by dependence on stationary wired payment systems. Card acceptance for home and office food delivery incurs costly card-not-present interchange fees that sap profits.



Wireless POS technology upends the traditional models and makes it possible to speed up service, bring the most effective payment to all points of service, and maximize server productivity and customer satisfaction.

According to the payments industry research firm Mercator Advisory Group, the potential market for pay at the table wireless POS in North America is conservatively estimated at more than $438 million – almost half of the wireless POS market total for all industries!

The Changing Face of Payment

Consumers are continuing the shift to electronic payments at a rapid pace. In recent years they have also wholeheartedly embraced debit cards and are increasingly anxious to utilize PIN debit to keep their accounts secure. Visa International reported that cardholders made well more than half of their Christmas 2005 holiday season transactions – 57 percent – using debit, compared to 54 percent of transactions in 2004. Many restaurants are unprepared to accommodate this shift to PIN debit and are also unable to capitalize on the lower transaction costs. Financial Insights, a market research firm, predicts PIN debit cards will overtake signature debit cards in total transaction volume by the end of 2009; meanwhile “Chip and PIN” smart cards are already being required in some countries and being phased in elsewhere over the next few years.

Consumer and privacy advocates are urging on the shift to PIN debit in the belief it is safer, less costly and presents less opportunity for fraud. For example, in the US, a $50 non supermarket transaction costs from $0.87 to $0.91 for credit cards, $0.68 to $0.69 for signature (or offline) debit and from $0.41 to $0.50 for PIN (or online) debit. A Federal Reserve report noted the significant advantages to merchants of accepting PIN debit over signature debit and credit cards: “Whereas the prices of PIN debit are capped at fixed levels, those of signature debit and credit increase with the purchase amount. For the average debit purchase amount (about $40), a signature debit transaction generates an interchange fee of about $0.57; for PIN-based networks, the fee is $0.34. The difference between the fees is even more substantial for purchases of $80, the amount of a typical credit transaction. For a purchase of this

amount, the signature debit rate is about $0.99, more than twice the PIN debit rate of $0.44. The fees for signature debit and PIN debit are less than those for credit ($0.72 and $1.33 for the two purchase amounts."

Operational Efficiency is Key Driver

Business innovations that enhance current systems and provide a competitive edge are vital to growth in the restaurant industry. Restaurant operators are intensely focused on improving operational efficiencies, increasing productivity and reducing costs – and, most importantly, improving the customer experience.

More than two-thirds of restaurant operators surveyed by the National Restaurant Association at the end of 2004 said they are more productive than they were two years ago. Almost a third planned to increase spending on technology in 2005. This surge in investment reflects the urgent market need for restaurant operators to adopt the tools to provide competitive and optimal levels of services during peak revenue hours.

Restaurant operators are keenly interested in increasing productivity inside their establishments by accepting payment at the table. Full service and casual dining restaurants were early adopters of card payment, but have stood still as other industry segments adopted new payment technologies, including wireless and customer-activated systems. Traditional stationary POS systems are ill-suited to the needs of pay at the table, drive-up takeaway, and delivery.

To take advantage of increasing use of PIN debit and EMV chip cards, restaurants must adopt consumer-activated payment systems that allow diners to privately enter PINs and complete their transactions. Today's payment systems need to be portable so waiters can bring it to the table. Just as important, these systems must be as easy for servers and consumers to use as an ATM device, and they to be rugged to ensure durability. Not only will restaurants increase profitability through acceptance of lower PIN debit interchange rates or compliance with EMV requirements, but they'll also increase customer satisfaction – even with diners who are increasingly uncomfortable about handing over their credit cards to a server who disappears into a back room.

Pay at the table service now offers restaurant operators the ability to take advantage of high-speed electronic payment – about 2-3 seconds per transaction. But it also offers the potential to revolutionize restaurant productivity by:

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

Just as pay at the table is revolutionizing sit-down dining, new payment systems also are opening up new avenues to meet customer demands for flexibility and convenience. A key innovation in food service is the rapidly increasing demand for convenient takeaway options. Restaurants are responding with automobile takeaway options where servers bring food out to the car, but the reliance on fixed POS systems has slowed efficiency and customer satisfaction. Cutting the reliance on phone lines by using Wi-Fi and GPRS cellular services makes it possible for servers to bring out the food, present the check and process the payment all in one trip.

Many diners are anxious to receive food delivered to their homes and offices but are often deterred by lack of cash on hand. Restaurants are increasingly sensitive to the profit potential in delivery services, but discouraged by the high cost of card-not-present interchange rates. The increasing availability and reliability of advanced cellular services like GPRS now makes it possible to bring the POS system right to consumers' doors, opening up new profit potential and reducing the danger and theft associated with handling cash.

The common factors among these usage scenarios are mobility, adaptability and ease of use.

Revolutionary Workflow

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

Pay at the table reduces that process to three steps:

1. Customer asks for check. Server asks if they will be paying with plastic
2. Server brings payment system to the table and leaves it with the customer to complete the payment transaction, including tip.
3. Server picks up terminal and receipt and thanks customer.

The productivity savings are tremendous. In the table service setting, wait time to finalize the payment steps is reduced, and table turns are increased, resulting in greater customer satisfaction and improved profitability. In drive-up takeaway and delivery, the process is even simpler: The server or delivery person carries the POS system to the consumer along with the food and completes the transaction in one trip. But adjusting to consumer activated payment requires more than simple mobility. The software interface has to be completely intuitive because consumers cannot be expected to learn complex processes and software prompts.

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 server-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.

VeriFone set out to design a portable payment solution driven by the needs of a new emerging market. This "Purpose Inspired Design" effort started with a rigorous investigation into usage scenarios to determine what the restaurant 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, handheld devices will be dropped, so 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.

- **Security and Privacy** – They 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 charging cables, and must have an integrated printer to minimize the number of steps required to complete a payment transaction.

Adaptable to all points of service – Wi-Fi is a great wireless technology that is amazingly cost-effective to use in table service environments. But it is a local area network technology that is limited to short distances. It is not useful in delivery service, or even in some drive-up takeaway situations. A system that can be used in all three points of service must be capable of adapting to both local area and wide area wireless service.

MAXui Design for Extreme Usability

VeriFone's research into restaurant payment systems 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 any direction.

The MAXui hardware design is accompanied by a user interface that is specifically designed for both consumer and server interaction. It 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.

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

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 better compares to PocketPC/PDAs than other wireless POS devices. But that's where the comparison stops. A PocketPC/PDA solution is easy to implement because most restaurants already own one, and development tools are readily available. But PDA-type devices are unable to accept PIN-based transactions and are susceptible to interception of data.

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 no non-authorized device can access the network to intercept payment data from POS devices.

The V^{x} 670 uses the Wi-Fi Protected Access, or 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 PED 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. Futhermore, 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 pay 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.

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 a 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 points to server staff so they can quickly see where to return a payment system.

The wireless LAN and wireless cellular technologies utilized by VeriFone devices enable any system to utilize any base within a particular restaurant. Unlike systems that utilize Bluetooth radio frequencies and require a one-to-one relationship between a device and a base, VeriFone systems utilize either Wi-Fi and communicate to a shared access point, or cellular GPRS and communicate to a cellular transmitter. The V^{x} 670 base includes a charging port for an extra battery. An optional full-featured base shares the same profile but also provides 2 USB ports for connecting supported peripherals, along with a dial connectivity port.

The VeriFone Difference

Bringing the PAY Anywhere philosophy to restaurants requires hardware and software that is specifically designed to do the job. VeriFone has harnessed the power of IP-based wireless technologies at the point of sale to ensure restaurant operators benefit from speedy and secure transactions. 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 takeaway to delivery.