The Move *to Mobile*

mCommerce creates connectivity anytime, anywhere, on any device

Microsoft

Mobile Commerce Helps Retailers *Move Ahead*

When someone asks me what mobile commerce means for retailers, I tell them that it means survival.

Before you start thinking I'm being overly dramatic, let me explain my reasoning.

First, to compete in the fast-changing digital economy, retailers need solutions that create business agility—the ability to change direction quickly, easily, comprehensively and profitably.

Additionally, today's market dynamics demand that retailers maximize efficiency throughout the supply chain as well as the corporate enterprise, and provide managers with business-critical information on performance.

And, as always, speed is critical to success.

Mobile commerce enables retailers to address all three of these areas while providing their customers with better service.

It may be useful to break the idea of "mobile commerce" down into its component parts. Our vision for mobility means enabling people to get the information and data they want anywhere, any time, and on any device.

In a retail context, that can mean everything from giving customers a way to access information about products and services from their own mobile device, to providing employees with the freedom to complete sales from any location in the store—not just at fixed cash registers.

What about the commerce part of the equation? Microsoft® envisions location-based commerce as a value for consumers and retailers alike. For instance, based on the proximity and registered "interest profile" of a consumer, new "matchmaking" software services will send personalized, targeted shopping information to the consumer's mobile device. It will save shoppers valuable time, and put retailers more directly in touch with their customers.

The use of Automatic Location Identification (ALI) and custom Global Positioning System (GPS) solutions coupled with individual purchasing profiles will fuel expansion of shopping-service opportunities based on proximity and interest.

And that's just one example.

At Microsoft, we've been working on mobile commerce solutions for several years. For example, our smart phone, currently code-named "Stinger," will offer users current personal information and e-mail as well as robust Web-browsing capabilities—and the ability to make purchases directly from the phone.

Our .NET initiative is partly about new devices and interfaces. Handheld wireless devices like cell phones and personal digital assistants are increasingly commonplace for retail customers. Retailers seeking greater business agility are also discovering the utility of handheld wireless devices for their staff.

And we recently announced a strategic relationship with Starbucks Coffee Co. to create a high-speed, connected environment in Starbucks locations across North America using MobileStar Network Corp.'s wireless broadband network. Customers will be able to access broadband content and services using their own wirelessly enabled laptops, smart phones, Pocket PCs and other handheld devices—all while enjoying a cup of Starbucks coffee. Starbucks also hopes to enable customers to pre-order drinks using their cellular phones.

As you'll see in this supplement, we have good reason to believe that mobile commerce stands to pay big dividends to retailers who start implementing solutions now.

Tom Litchford
Retail Industry Marketing Manager
Microsoft Corporation

mCommerce - The Move to Mobile

Mobile Commerce:
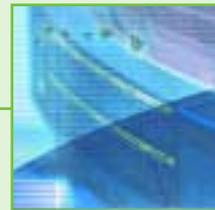
Fulfilling the promise of wireless technology

Cutting the wires that keep service and sales personnel tied to stationary POS terminals can improve both customer service and sales. That's what more and more retailers who are implementing wireless solutions are discovering.

F irst there were cellular phones. Then wireless technology made it possible to return your rental car—and even get a printed receipt—without standing in line behind a dozen harried travelers. And now wireless is improving service for retail customers while providing new ways for retailers to increase sales and operating efficiencies.

Points of Differentiation

Simply put, mobile commerce (mCommerce) is the ability to interact and transact with anything and anyone, any time, and anywhere. It will eliminate the barriers of time and location.

mCommerce also offers retailers a new way to differentiate themselves. But it's important to keep the customer in mind, according to Jeff Luker, co-Managing Partner of **Accenture's** North American Retail practice.

"From a retail perspective, I look at mCommerce as what it does or does not bring as a point of differentiation to a retailer," said Luker. "At the end of the day, value is still defined by the consumer, not whether or not a store has the latest neat new technology."

Luker described four pillars of differentiation available to retailers: product, location, operational excellence, and

continued next page

customer intimacy. "The whole mCommerce arena can impact the third and fourth of these pillars," he explained.

In terms of operational excellence, mCommerce gives retailers the ability to streamline operations and cut costs. For example, a wireless device that transmits data to a store's existing computer systems can be used for in-store receiving, cycle counts, merchandise availability, and other tasks. Vendors and suppliers can even use handheld devices

to get the product information they need, replacing often inefficient phone and fax communications.

But, Luker said, improving store operations is only the short-term advantage of mCommerce. "In the long term, the real benefit is the improvements in service that mCommerce enables retailers to offer to their customers," he explained.

Luker said technology enables retailers to offer customers "not so much an mCommerce solution as a personal solution." For example, wireless handheld mCommerce devices allow retail sales associates to provide a "personal concierge" level of service, accessing key customer information—such as purchase history and brand preferences—without leaving the customer's side.

Beyond that, Luker envisioned a future where mCommerce technology strengthens customer relationships by creating a bond between the customer and the retailer. "Let's say you're shopping at a music store and want to get a new CD," said Luker. "You could pull up your personal list and see every CD you've ever bought there."

Taking this idea a step further, the music store could send the customer a wireless message if an

Globally, 240 million people are predicted to use their phones for wireless data exchange by the end of 2004—up from 26 million in 1999.

(Source: Allied Business Intelligence)
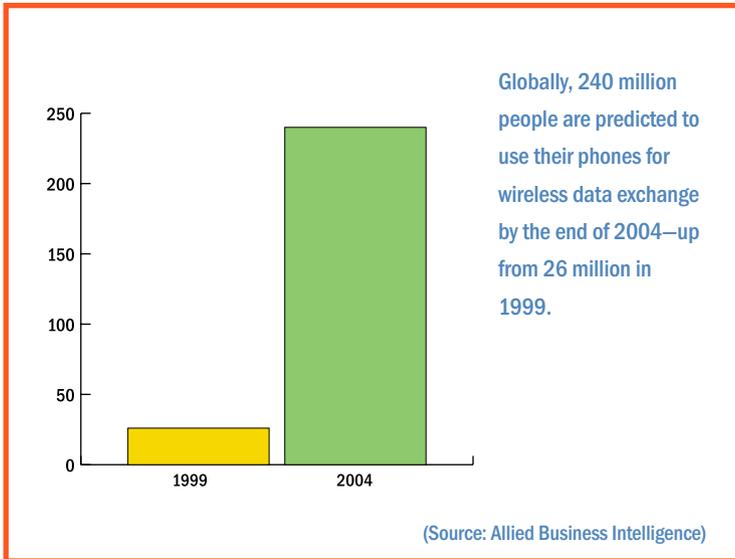
Case Study: Herman Miller

Intermec Technology Provides Customer Service Tools

Herman Miller is the world's second largest manufacturer of office systems. With fiscal 2000 net sales growing to $1.94 billion, the Zeeland, Mich.-based company maintains an exceptional standard for quality.

Yet Herman Miller knew it could do even better.

That's why the company turned to Intermec Technologies Corp., and Intermec partners Baan USA and FutureNext Consulting for an innovative system that tracks customer orders through manufacturing and distribution. The system enables

Herman Miller to provide its clients best-of-class customer service.

The key to the system is the basic bar code label. It streamlines every process in each of the company's manufacturing sites. Herman Miller's suppliers place bar code labels on all of the materials used to construct the company's products.

As those materials arrive at a Herman Miller warehouse, the bar code labels are scanned with a wireless Intermec T2425 Trakker® Antares™ data-collection terminal or its forklift-mounted equivalent, the T2455. For putaway, the materials are

simply linked to their location with a scan of the bar code label attached to the putaway slot.

The use of readable bar code labels means that even custom manufacturing can be tracked. It takes Herman Miller about four hours to build a customized chair. Customer service representatives can now relay reliable shipping times to customers, because each chair's bar code label is scanned at each step in the production process. Reps can accurately predict when the chair will be packed onto the delivery truck.

Terry Wolf, Senior Systems Analyst

artist he or she likes releases a new CD—and even tailor offers to specific customers.

Getting Closer to the Customer

For some retailers, mCommerce is a case of technology putting companies closer to their customers by removing the traditional boundaries that have existed in retail environments.

"The ability to interact with a customer in real time lets companies provide a closer level of service," said Robert Zink, Vice President of the Solutions Sales Group for **Intermec,** Everett, Wash.

As an example, Zink points to Intermec's new StoreTrader Mobile Point of Service product. "This solution allows a retailer to process transactions and immediately provide customers with information on products and availability," explained Zink. "Implementing StoreTrader on a wireless handheld computer with an integrated scanner enables sales associates to greet customers confidently, knowing they will be able to answer questions, retrieve information based on model numbers, and provide accurate product availability."

There are expected to be 40 million U.S. wireless Web subscribers by 2003, more than 11 times the current 3.5 million subscribers.

(Source: International Data Corporation (IDC))

According to Zink, this technology is not only convenient for the sales staff—it can even enhance sales. "Suppose a customer is looking at a new high-definition television," he said. "Finding out that it's out of stock might normally cost the store a sale. With StoreTrader, the sales staff can order a set from the floor, arrange delivery, and, with a belt printer and card swipe, process the entire purchase on the spot."

And because the customer's overall shopping experience is

at Herman Miller, cites supplier bar coding as the major change agent. "Our employees were used to working from a packing list, and they would need to reconcile the list to what they received. That was all done by someone other than the person physically unloading the trailer," he said. "On the financial end, the entire invoicing cycle has been compressed because the packing list information is available as soon as it is scanned."

The wireless aspect of the system delivers efficiency previously lacking in the receiving and putaway process. "Personnel can now scan and show received goods at the receiving dock without even getting out of the fork-lift," Wolf said. "Also, putaway can be done at the actual warehouse locations. Before the wireless capability, workers had to hand write what was

received and where it was put away. Then those documents would be handed off to someone else for data entry."

Data entry labor has been sharply reduced, freeing workers for other areas of manufacturing. And, by virtually eliminating hand keying, Herman Miller has taken human error out of the equation.

Now fully implemented, Herman Miller's Intermec-based system has helped the company tighten its supply chain, improve quality, and become even more responsive to its customers.

seamless, the likelihood of a return visit to the store is significantly increased, despite the product having been out of stock.

StoreTrader runs on an Intermec 700 wireless handheld terminal—a rugged mobile computer running on the Microsoft Windows Pocket PC Platform—with an integrated scanner. The system operates on an IEEE 802.11b wireless LAN, enabling retailers to perform POS functions anywhere inside a store and in confined areas outside a store.
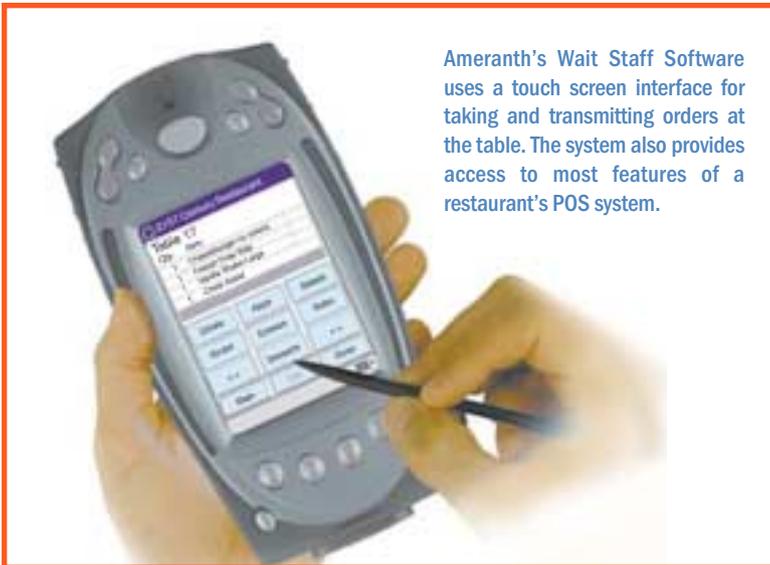
Ameranth's Wait Staff Software uses a touch screen interface for taking and transmitting orders at the table. The system also provides access to most features of a restaurant's POS system.

"Because of the mobility this new system offers, we see many applications for it," said Zink. "For example, lumber yard workers must wait on customers outside where the lumber is stacked. When orders are loaded into customers' vehicles, the customers must walk inside to pay for their purchases. With Mobile Point of Service, entire transactions could take place outside, right beside customers' vehicles. Once again, improved customer service equates to improved customer loyalty."

Improving Service—and Sales

Keith McNally, Senior Vice President of Business Development for San Diego-based **Ameranth Wireless,** describes his company's 21st Century Restaurant Wireless POS Interface by recalling the "old" days when customers had to go inside the station to pay for self-service gas—often waiting in line to do it. "Nowadays you just swipe your credit card at the pump—and save about five minutes with every fill-up," said McNally. "We're bringing that same convenience to restaurants."

Ameranth's system enables servers to take and maintain orders on a Pocket PC handheld—up to and including payment processing. "Our solution

Case Study: Big Jim's Old South Bar-B-Q
Ameranth Wireless Brings Customer Service into the 21st Ce

Jim Wade, owner of Big Jim's Old South Bar-B-Q in San Diego, knew from market research and personal experience that authentic cooking and a traditional menu weren't enough to build a successful restaurant. It also had to be grounded in customer loyalty and profitability. "I wanted my restaurant to be a model of efficiency and customer service," said Wade. "I envisioned a system based on wireless technology that integrated with a traditional POS system."

To achieve this, Wade sought a way to bring the wait staff from behind the fixed point of sale terminal, giving them more time to interact with customers

and improving the general operations at the tables. His operating model required a versatile, user-friendly and reliable POS system that shortened the time required to place, deliver, and pay for orders.

Wade found the solution he needed in Ameranth's 21st Century Restaurant system, which is integrated with Aloha Technologies' traditional POS system. The Ameranth 21st Century Restaurant system improves service with tableside ordering and payment processing, eliminating the need to walk back to a fixed terminal and re-record the order information. It integrates the restaurant's

Aloha POS system with Ameranth's software interface, running on wireless Pocket PC handheld computers used by the servers.

"The Pocket PC device communicates directly with the wireless LAN via Ameranth's software, which routes and translates the messages it receives from the handheld terminals," explained Wade. Together, the system gives restaurant wait staff seamless access to their POS system from any location in the restaurant.

The 21st Century Restaurant Software system consists of three modules: Back Office Software for wireless-

offers restaurants greater efficiency by letting them get orders in faster and process payments right at the table," explained McNally. "Since the restaurant doesn't need as many employees to perform the same functions, its profits go up."

The wireless POS interface brings the point of sale back to where it belongs, at the customer's side. The server transmits orders directly from the table into the POS system via radio frequency. No time is wasted writing down orders and then re-entering them at a fixed computer terminal.

When it comes time to pay, credit cards can be swiped and processed right at the table, increasing the customer's security and saving still more time.

"There's no one who doesn't like this system," McNally said. "Servers like it because they can manage more tables—and get more tips. Management likes it because it enables them to turn more tables—and generate more revenue. And diners like it because it provides faster service and virtually eliminates mistakes."

According to McNally, the system is so efficient, the bar

> **"Our solution offers restaurants greater efficiency by letting them get orders in faster and process payments right at the table."**

can be preparing drinks while the server is still taking the appetizer order. "Once the server hits 'Enter,' the order is transmitted to the bar," he said.

Ameranth's software interface, activated with a finger or stylus, runs on the Microsoft Windows-powered Pocket PC platform using devices from Symbol, Casio, or Compaq, and is based on familiar POS touch screen terminals.

"Because our software works in conjunction with POS systems, servers can remotely access most of the specialized features of POS systems, such as clocking in and out, adding special modifiers, holding and firing orders and routing food orders to separate printers within the restaurant," McNally pointed out.

The system is very easy to add to any restaurant that already has a compatible POS system. "All the installer has to do is turn on the wireless access point, load middleware on the manager's back office computer, and turn on the wireless devices," said McNally. "The device automatically downloads the menu for that restaurant—no additional code is needed."

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LAN integration, Wait Staff Software for wireless ordering, and the Payment Processing Software for wireless cash and credit card processing. The Wait Staff Module uses a touch screen interface for taking and transmitting orders at the table.

The system also provides access to most features of the restaurant's POS system. Wait staff can also process an entire payment at the tableside with Payment Processing Software via infrared (IrDA) communication between the Pocket PC device and wireless mobile printer. Credit card authorization functions reside in the Aloha application.

Big Jim's client/server architecture was built from the ground up on the Microsoft Windows NT® Server platform. This enabled Ameranth's developers to offer a highly scalable and reliable system that could leverage Microsoft support for XML (Extensible Markup Language) and the COM (Common Object Model) programming model. These two development technologies foster faster time-to-market, greater business agility, and easier interoperability among different

devices, applications, and databases.

Since installing the 21st Century Restaurant System, Jim Wade reports that his restaurant has increased the number of customers served in an average seating, reduced staffing costs, raised employee satisfaction, and improved customer service.

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