



Voice-over-WLAN in Retail: The Power of Converged Solutions



Push-to-talk voice services allow workers to reach a product expert or an associate in a specific department to provide a rapid answer to a customer inquiry.



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There is an enabling technology that retailers can deploy today that will leverage the existing network infrastructure — Voice over WLAN (VoWLAN). This natural addition will help retailers deliver a differentiating experience in the store — an enhanced level of service that will not only help improve customer loyalty and retention, but also help store associates increase the size of the sale.

Background

Today's retailers face some of the toughest issues ever experienced in the history of retailing, heavily driven by the omnipresence of the Internet. The Internet has given birth to the global marketplace, pushing competition to an all time high. Now, your competitors include the physical stores in your backyard — as well as stores, boutiques and individual craftspeople all around the world. Customer demands and expectations are also at an all-time high. In just minutes on the computer, customers can have it all — the quality product they want at the lowest price possible, delivered right to their door — often overnight. To respond to heightened pricing pressures, manufacturers are turning to offshore manufacturing, which does enable price reductions to the consumer — but also reduces already thinning retailer margins. And finally, since consumers can access the Internet anytime and anywhere to check product availability and the best pricing — on home computers as well as on PDAs and cell phones right in your store aisles, they are redefining the shopping process itself to find the right product, when they want it, at the right price.

To address these issues, retailers will need to take customer service to the next level. When today's consumers enter your store, they are armed with an arsenal of information and very high expectations. Your customers expect your store associates to provide the same split second answers they are able to obtain on the Internet — and to know more about your products than they do. They expect to be able to quickly and easily locate and purchase the product they want.

There is an enabling technology that retailers can deploy today that will leverage the existing network infrastructure — Voice over WLAN (VoWLAN). VoWLAN

is a natural addition that will help retailers deliver a differentiating experience in the store — an enhanced level of service that will not only help improve customer loyalty and retention, but also help store associates increase the size of the sale. VoWLAN-based solutions allow you to layer voice onto your existing mobile computing data applications, providing your store associates with mobile voice as well as data — all on a single device. Now, your store associates carry virtually all the functionality required to perform their tasks, anywhere on site. And these truly mobile workers, who are on the move throughout the store all shift long, are now easily accessible to managers through push-to-talk walkie-talkie style communications and text messaging. And sales associates on the floor can easily call a store manager, a product expert or a backroom clerk as needed to best serve your customers — without ever leaving the customer's side.

And VoWLAN solutions provide real value — for the customer as well as for the retailer. Customers experience better service, while retailers are able to extend the value of existing investments to deploy new functionality to workers. VoWLAN solutions are extraordinarily cost-effective, enabling retailers to leverage existing network infrastructures to extend mobile voice over the wireless LAN without the drawbacks of cellular services — no monthly service fees and no in-building cellular coverage issues. In addition, since voice can simply be added to the same mobile devices your workers must carry, you can eliminate the need for disparate voice and data systems, delivering a number of operational IT benefits. With voice and data on the same network, walkie-talkies and overhead paging systems can be eliminated, workers have fewer devices to carry, the retailer has fewer devices to purchase, and IT has fewer devices to deploy and manage.

Adding voice to your mobile data computing applications enables true enterprise mobility — now you can provide a single multi-function device that offers the tools your workers need to conduct on-the-spot business. In addition to placing and receiving calls, data options can allow workers to: scan a bar code and swipe a magnetic stripe on a credit or customer loyalty card; read an RFID tag; capture images and more. Your employees are empowered to answer customer questions, identify and cross-sell appropriate items and even complete the sale — right on the store floor. Your employees enjoy a richer 'toolbox' of 'in-hand' capabilities that enable the delivery of better customer service, the closing of more sales and more opportunity to increase the size of a sale.

You've empowered your workers with mobile data access to remove the tether to the desktop computer. VoWLAN completes your mobility solutions by removing the tether to the desk phone and other separate voice systems with mobile voice. The sales associates and sales managers on your retail floor are among some of the most valuable workers today. You count on these workers to remain on the retail floor, providing red carpet service to your customers. With VoWLAN solutions...they can.

What is VoWLAN?

VoWLAN is digitized (or packetized) voice conveyed over an IP network (VoIP) and distributed over a wireless local area network (WLAN). VoWLAN-based solutions allow you to extend voice as well as data over the wireless LAN, thereby improving and accelerating the return on investment (ROI) for mobile data infrastructure. Since the WLAN is the backbone instead of the cellular network, in-building coverage issues typically associated with cellular service are eliminated, as are the monthly subscription costs per user. And since WLAN is wholly owned by the enterprise, retailers enjoy complete control over the network to help ensure a consistent high quality and dependable voice connection.

There are four major technical aspects of a VoWLAN solution:

- Voice-capable mobile computers for integration of voice and data services on a single device.

- A telephony server to coordinate the voice connections and delivery of voice features, preferably based on the Session Initiation Protocol (SIP) standard. While proprietary systems do exist, systems based on open standards offer the most in flexibility, interoperability and extensibility.
- The PCI-compliant WLAN infrastructure, which enables the secure extension of wireless voice and data services throughout your facility.
- A management solution to simplify the day-to-day support of the mobile devices, the software installed on the mobile devices and the wireless LAN infrastructure; ensure the security of voice and data while in transit over the WLAN; and ensure quality of service to eliminate dropped calls and more.

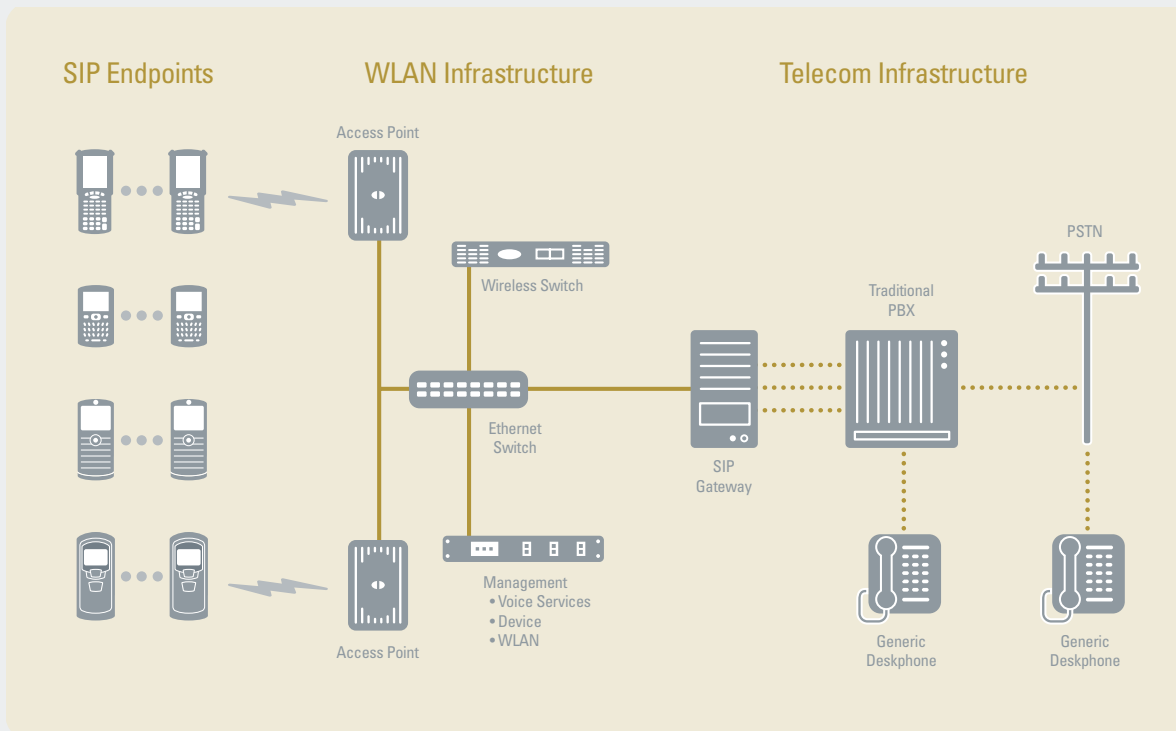
A full complement of voice service options

Broad voice functionality allows you to extend the type of voice services that can best benefit your retail operation:

- Peer-to-Peer: 'Person-to-person' calls that do not pass through your PBX.
- Push-to-Talk (PTT): Walkie-talkie style services that allow a call to an individual, a select workgroup (such as all employees in the sporting goods department or all workers in the back room) or to all employees.
- Basic Feature Telephony: The ability to extend the desk phone extension to a voice-enabled mobile computer, but with a limited feature set (such as hold and call waiting). The advantage of basic feature telephony is its extensive compatibility with a very broad range of PBXs.
- Full Feature Telephony: The ability to offer complete emulation of the desk phone on a mobile voice and data device, complete with full PBX functionality — from 4-digit extension dialing to call transfer and call forward, voicemail, and cost-saving features such as least-cost routing.

VoWLAN: SIP example

The SIP standard protocol offers highly flexible and interoperable solutions.



The above schematic illustrates the architecture of a typical VoWLAN-enabled solution.

VoWLAN use cases in the retail environment

The following use cases illustrate the value of voice in the retail environment, and where and how it can be deployed to maximize efficiency, customer service levels, customer satisfaction, customer retention and sales.

Mobile manager

With VoWLAN-based solutions, store managers can remain out on the sales floor where they are most effective, yet still keep the tools required to conduct business literally in hand. Mobile voice push-to-talk allows managers to reach workgroups or all workers at the press of a single button. For example, a manager could broadcast a call for three additional checkers at the front desk or put in a call to the janitorial staff

for a cleanup in aisle nine. With the ability to receive inbound calls, managers never have to leave the sales floor to locate a phone to answer a page. In large stores with expansive environments, managers are now always accessible to employees as well as customers, without reducing manager productivity. In addition, tasks can be issued to specific people or to a workgroup such as the collection of shopping carts in the parking area, the need to restock a specific item or shelf or the need to add checkers to reduce long lines at the register. And since workers can acknowledge receipt and completion of tasks, general task management is more efficient — managers know when workers are available for another task.

In addition to voice, data capabilities enable managers to respond to urgent email, monitor real-time sales and inventory data, monitor schedule changes and meeting requests and more — regardless of where they may be in the physical store environment.

No longer dependent on a wired phone, managers can now more tightly manage store operations and staff to maximize productivity, the consumer experience and customer service levels.

Mobile operator

Mobile voice enables retailers to either maximize the efficiency of existing operators or to eliminate the dedicated operator. The ability to extend PBX calls to a mobile voice and data device enables operators to perform other duties throughout the store when call volumes are low — from serving customers during busy times to restocking shelves and taking inventory. Alternatively, mobile hunt groups allow incoming calls to be distributed to multiple extensions, allowing existing employees to share the job of operator, eliminating the need and cost associated with a separate operator.

In both cases, the result is increased business agility. Since employees can be dynamically assigned to take calls directed at the store operator, the business is better positioned to ensure adequate switchboard coverage despite anticipated and unanticipated peaks and valleys in incoming call volumes. And regardless of call volume, customers can count on calls being answered and routed promptly.

Customer assistance on the retail sales floor

With mobile voice functionality store associates have the tools to best serve customers, regardless of the specific need. Associates can check price, check stock and call another store to check stock availability without ever leaving the customer. If the customer has a specific product question, the associate can reach the right product specialist instantly. If the register lanes begin to back up, clerks can immediately put out an emergency request for additional checkers to report to the registers — before service quality is impacted. Customers can press a button on a store kiosk to request help in a specific department — and an automated voice call or data alert can be sent to all employees who work in that department, complete with the specific kiosk from which the call originated. Through the power of mobile voice, retail associates can deliver customer service with a difference, with rapid and accurate answers to questions in seconds, and fast response times to calls for assistance.

Find an expert

Mobile voice offers unique benefits for do-it-yourself (DIY), electronics, furniture and home appliance stores. In these environments, there are usually thousands of products. Customers are often frustrated as they are unable to locate the right department specialist to answer questions or simply locate specific items. And new store associates are hesitant to help customers for the same reason. Also overwhelmed by the volume of products, they may hesitate to reach out to help a customer with a question as they likely may not have the answer — and cannot easily locate someone who does. As a result, customer service in the DIY suffers.

Mobile voice is the ideal enabler in this situation. Mobile voice provides workers with push-button access to a product or departmental expert, ensuring that even if they don't know the answer to the question, they can locate someone who can in seconds.

The result is improved employee confidence and increased willingness to serve the customer — substantially improving the quality of customer care.

Store operations (non-customer facing)

Throughout the day there are a number of operational tasks that need to be executed. Without mobile voice, store associates and managers are required to locate a phone to call the appropriate personnel and remain on the phone until the question has been answered. But when all store associates have mobile real-time voice capability, task management is greatly improved. For example, a store associate may need to call for a clean up of a jar of spaghetti sauce in aisle three. Since the broken glass represents a major safety issue, the ability to reach the right worker and obtain instant acknowledgement when the task is complete ensures customer safety and helps better manage enterprise risks. The store manager may be conducting an informal inventory and discover that a few items are out of stock on the shelves and still show out of stock in the warehouse. A quick call to shipping and receiving verifies that the shipment just arrived, enabling the manager to schedule quick replenishment of the item that is currently out-of-stock on the retail floor.

When backroom staff are enabled with mobile voice as well as data, they are always instantly available to managers and sales associates to verify if a shipment has arrived, replenish an empty shelf, bring an item to the sales desk and more.



The VoWLAN business advantage

VoWLAN converged voice and data solutions deliver a wealth of strategic and operational advantages for retailers:

Strategic advantages

Better customer experience:

- For customers in the store: Employees no longer need to leave the customer's side to obtain information — they can remain with their customer and locate a specialist to answer a product question, call a worker in the back room to have an item brought to the sales counter, locate a manager to approve a return and more. As a result, customers receive faster and more personalized service for an improved customer experience, leading to higher probability of a repeat visit — and increased customer loyalty and retention levels.

In addition, since the mobile device can also double as a point of purchase, associates can ring up customers right in the aisle when the checkout lanes are backed up — protecting sales and profitability.

- For customers phoning the store: Every day, customers phone retailers to ask a myriad of questions. They may want to check to see if a certain product is in stock before making a trip to the store. They may have a product-specific question, want to check on the status of a special order or have questions about the gift registry or gift card program. With VoWLAN, each call can be instantly routed to the store associate best suited to answer the question. Callers are routed to the right person the first time for a rapid answer to virtually any question. The result is fast customer service, leading to fewer abandoned calls — and fewer lost sales opportunities.

Increased worker productivity:

- Workers can now place and receive calls no matter where they are in the store, as well as access key retail business applications. Workers no longer need to spend time: traveling to a phone to place a call to a product expert or a supervisor to obtain an answer to a customer question; walking to

an area to try to locate a product or department expert; or walking to the backroom to check stock. The increase in staff efficiency allows the same number of workers to handle more customers, and to provide better and more personalized attention. In addition, the retailer can better control staffing costs, and is better prepared for daily and seasonal spikes in customer traffic.

Increased worker confidence:

- New hires and seasonal workers can often experience anxiety on the sales floor, intimidated by the volumes of questions they'll need to answer on thousands of products for demanding customers. As a result, these workers may seek to avoid customer interaction rather than reach out to assist your customers. With converged voice and data solutions, these workers have all the tools they need to place a call, research stock and pricing, find a product expert and more. Better armed to perform the job, confidence is improved — reducing the learning curve and improving the level of service that you can expect from new and seasonal workers.

Increased revenues:

- Every time your associates walk away from your customers, it is just like placing a call on hold — the customer now has the opportunity to walk away and take their business elsewhere. Since associates no longer need to leave the customer side to track down the answers to questions, the opportunity for lost sales is reduced. As a result, more sales are closed, increasing revenues.

Operational benefits

When the WLAN is utilized to extend voice functionality to workers inside the four walls, benefits include:

Reduced capital costs:

- There are fewer devices to purchase. The need for other equipment — such as walkie-talkies, pagers and cell phones — is virtually eliminated.
- Fees associated with other systems are decreased, such as spectrum licensing for walkie-talkies, monthly cellular subscriber fees and airtime fees.



When sales associates are enabled with mobile voice as well as data, there is never a need to leave the customer's side — at the press of a button, workers can request a stock check for another size or color, obtain an answer to a question or locate a favorite personal shopper .

About Motorola's Converged VoWLAN solutions

Motorola's converged VoWLAN capable products allow retailers to simply and cost-effectively add voice to mobile computing solutions. With our partners, our end-to-end solutions offer everything you need to achieve maximum success with your VoWLAN solution, including proven technology, products and support services that are in use in many of the largest retailers all over the world. Our broad line of voice capable integrated voice and data mobile devices are built for enterprise use and designed to meet any need in the retail environment — from store associates on the sales floor to workers in the back room on foot or on forklifts. Our wireless LAN infrastructure is built to manage the unique challenges of mobility, delivering outstanding dependable wireless connectivity as well as high-quality voice — and enables the extension of wireless communications to every corner of your retail environment, inside and outside. And our mobile computers and wireless LANs offer PCI-compliance, ensuring the security of over-the-air voice and data communications and protecting sensitive customer data. Our solutions also offer cost-efficient manageability by providing a centralized command center that significantly reduces the time and effort required to provision, monitor, control, troubleshoot and update your mobile devices and infrastructure — regardless of where in the world they may be. Our extensive world-class partner channel includes leading PBX manufacturers and a broad base of independent software vendors (ISVs) that provide a wealth of experience in the delivery and deployment of many voice applications. And our Enterprise Mobility Services provide the expertise you need to get and keep your converged solution up and running at peak performance — from design and deployment through day-to-day support.

Reduced operational costs:

- Fewer devices to manage translate into less management time and reduced support costs.
- Since separate voice devices are virtually eliminated (for example, walkie-talkies), training requirements are also reduced.

Maximize existing investments:

- The ability to layer VoWLAN solutions over your existing WLAN and PBX/desk phones:
 - enables very cost-effective deployment of voice in the retail establishment
 - allows the retailer to phase the rollout to meet budget requirements
 - provides minimal disruption to store operations
 - further reduces the total cost of ownership (TCO) and accelerates return on investment (ROI) for existing business technologies

Summary

Retail associates are on the move all shift long throughout the retail store. VoWLAN-based solutions can empower these highly mobile workers by providing the real-time voice and data capabilities required to streamline business processes to improve overall effectiveness, achieve a new level of responsiveness and deliver an unprecedented level of customer service. The end result is an increase in sales without increasing staff costs, ultimately improving overall profitability.

VoWLAN-based solutions also offer outstanding value. In addition to the business benefits, these solutions can be implemented cost-effectively as they integrate with existing technologies — the wireless LAN and the PBX. Capital expenses associated with VoWLAN-based solutions are minimized, and the ability to leverage existing investments provides a rapid return on this strategic retail investment.

Get a competitive edge in your retail store...with VoWLAN technology.

To find out more about Motorola's VoWLAN solutions or VoWLAN technology, please visit us on the web at www.motorola.com/VoWLAN or access our global contact directory at motorola.com/enterprise/contactus



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