Aerohive NETWORKS

Whitepaper

Smart Mobility Platform for Retailers

Mobility Platform For Retailers to deliver better customer experience for mobile-savvy smart shoppers

Executive Summary

Mobile consumers are in the position of telling retailers where, when, and how they prefer to shop. The shopping experience is no longer confined to the time during which a customer is in a store, although stores are still important fulfillment points for customers. Instead, most consumers look for products, look for stores, compare prices, and seek others' opinions using a mobile device. Instead of hesitating to open their stores to wireless, retailers should confidently pursue the opportunity with the right wireless network solution. Not only can they enhance their customers' experience with their brand, they can also use wireless to gather far more insight into shopping and purchase behaviors to drive sales and improve operational effectiveness.

Going Mobile and Never Going Back

Consumer adoption of mobile smart devices has outstripped the historic rates of PC, Internet, and even social media adoption. Mobile devices have become so integrated with most consumers' lives that they can hardly imagine life without them. And this reliance on mobility is radically changing the way that people shop and make purchase decisions.

Anytime, Anywhere Shopping

Shopping has become an "anytime anywhere" activity, thanks to smartphones and tablets. As a result, there are now multiple paths available for purchasing goods and services—and shopping in a brick-and-mortar store is just one. A 2012 study conducted by IBM surveyed shoppers in eight mature and seven growth economies. It found that 45% of consumers use two or more technologies to shop, typically using a combination of PC-based Internet search and mobile. And 71% of consumers surveyed said they were willing to shop digitally (Winning Over the Empowered Consumer: Why Trust Matters, IBM Corporation, 2012).

Mobility is integrated with Consumers' Shopping Experience

Consumers rely on mobile capabilities throughout a shopping experience. Research shows that consumers' top four uses of smart mobile devices are finding a store location, checking prices, researching an item before purchase, and reading purchase reviews. The Nielsen study, Mobile Devices Empower Today's Shoppers In-Store and Online (December 4, 2012), found that 78% of mobile shoppers say they've used their smartphone to find a store and 63% have checked prices online while shopping.

As part of the growing mobilization of shopping, the use of tablets surpassed smartphone usage for shopping for the first time in 2012. Tablet traffic increased 348 percent while smartphone visits grew by 117 percent over the same period. Almost all of the tablet traffic (95 percent) was from the iPad (Tablets Now Drive More E-Commerce Traffic than Smartphones, http://gigaom.com/2012/06/29/).

Yes…But

What do these trends mean to retailers? To date, wireless applications for retail have largely focused on technologies, such as barcode scanning, that help achieve operational and supply chain efficiency. However, as mobility revolutionizes customers' lifestyles, retailers must dramatically change the way that they view the shopping experience.

When asked about their strategies to incorporate mobility, 47% of retailers believe that the purpose of their mobile strategy is to enhance their overall brand. In addition, 45% believe that mobility is an effective extension of their existing online offerings (The Impact of Mobile in Retail, Retail Systems Research, December 2012). However, when asked specifically about their investments in mobility to improve customers' experiences, few have taken decisive action. As a result, customers are now in the driver's seat and have high expectations, creating challenges for retailers on many fronts.

Playing Catch-up with Customers

Traditional retail assumes that consumers' entire shopping experience occurs in a store. Yet today, the store is no longer simply a physical location. Retailers must be able to support their customers' entire shopping experience wherever the consumer happens to be. Mobile access to content, comparisons, and community opinions is an important part of the shopping experience today—even when consumers happen to be making buying decisions in a brick-and-mortar store. In fact, the IBM study found that "when consumers research products, the store is still the preferred destination and is complemented by digital technologies."

Perceiving Additional Risk

Most retailers agree that they need a coherent mobile strategy, but with slim margins, they feel that they can't afford to risk implementing innovative mobility tactics. With high consumer expectations and tough competition for wallet share, retailers cannot afford to lag behind without incurring an even higher risk to their brands. Successful retailers are adopting a proactive stance toward mobility and fully expect mobility to significantly improve their annual sales by creating a transparent cross-channel experience.

Connecting Across Locations and Channels

Consumers live a "stay-connected" lifestyle—always in communication with family and friends, texting frequently, and accessing information at a moment's notice wherever they are. As a result, they are able to instantly compare product offerings and check availability across a retailer's online and physical channels. A significant challenge for retailers is to make pricing, offerings, and product accessibility consistent and seamless across their storefronts, distribution centers and warehouses, and standalone kiosks.

Classic virtual private networks (VPNs) that connect stores, warehouses, and contact centers to corporate networks add cost, complexity, and high support requirements to each location, making it difficult to achieve a seamless cross-channel experience.

Bringing Sales Staff Up to Speed

Too often, retail store employees are not as knowledgeable about products, prices, and availability as their customers. As a result, 73% of shoppers prefer to use their smartphones for tasks and only 15% want to interact with a store employee (Accenture, Dec. 6, 2012). To deliver a superior experience, retailers must give employees the same—or better—information as the information that consumers have at their fingertips. Having wireless infrastructure on the selling floor is no longer optional, and enabling wireless applications for employees is essential for them to access information and deliver a differentiated experience.

Finding Appropriate Management Resources

According to the Retail Systems Research study, retailers cite a lack of "project prioritization and manpower as their largest enemy" to taking advantage of new mobile opportunities. Managing mobile infrastructures across locations has usually demanded extra staff to maintain the infrastructure as well as implementing new initiatives. Adding staff—and therefore, cost—is usually not an option given slim margins and budget constraints.

Taking Advantage of New Opportunities

Compared to online retail sites, physical stores have little insight to consumer behavior. In-store retailers need to extract meaningful metrics about shopping visits, traffic patterns, shopping behaviors, and spend in order to optimize customer acquisition, loyalty, and engagement. Consumers' mobile devices offer the perfect vehicle for gaining valuable visibility into in-store behaviors. Most mobile devices have embedded Wi-Fi and consumers tend to leave the Wi-Fi connection active, even when they are not logged into a network. Wireless infrastructure and analytics software can use these signals to generate valuable data for tuning sales, promotion, and loyalty strategies.

Wireless Networking for the New Shopping Experience

The right wireless network can become as indispensable to retailers as mobile smart devices are to their customers. From connecting stores, warehouses, distribution centers, and contact centers to delivering valuable shopping data from in-store customers, the right wireless network can transform the shopping experience and ignite new levels of customer brand loyalty.

Control the Shopping Experience

The most successful retailers realize the value of in-store Wi-Fi for providing comprehensive in-store coverage and Internet access for customers and employees alike. Give customers the ability to check product details, sizes, and availability in the aisle. Once they are in your store, the convenience of being able to order or purchase immediately helps increase shopping satisfaction.

The best-performing retailers also are more likely to provide mobile devices to store and department managers. With wireless devices, sales associates can instantly access information to answer questions, find items that customers seek, and gain access to additional product expertise and sales tools. For example, they can easily access product demos to show a customer on a monitor, compare specifications, and increase upsell with information about optional features.

Create A Seamless Experience

With the right, cloud-enabled wireless network, retailers can not only implement Wi-Fi in stores, they can easily connect stores, warehouses, distribution centers, kiosks, and other locations to create a seamless mobile environment for employees and customers. A cloud-enabled wireless network can deliver a zero-touch, auto-provisioned network, complete with wired and wireless connectivity for transparent access from anywhere.

Store and warehouse employees don't need to be tech-savvy to install and configure equipment and centralized policy deployment maintains security and access privileges to network capabilities.

Simplify Management

Another benefit of a cloud-enabled wireless infrastructure is ease of management. Automatic provisioning, consistent policy deployment, and centralized management of network resources enable an administrator to manage thousands of devices as easily as one. Device security management helps ensure that mobile devices are able to access the right content and device management and inventory collects information and tracks usage and licensing.

For employee wireless devices and customer-owned devices, agent or profile-based mobile device management allows an administrator to tightly control devices on the network by enforcing security parameters, such as requiring a passcode on the device, remotely wiping the device in the event of misuse or mishandling, controlling app and software installation and updates, and distributing configuration information.

Support PCI Compliance

The Payment Card Industry Data Security Standard (PCI DSS) recognizes wireless LANs as public networks and assumes that they are exposed to public vulnerabilities and threats. Smart cybercriminals can configure servers, laptops, printers, and other devices to exploit weaknesses in point-of-sale (POS) terminals or other store systems, even if there is not a wireless network deployed. A secure wireless infrastructure includes a Private Pre-Shared Key (PSK) system that generates and manages separate pre-shared keys for each WLAN client. This enables multiple users, each with a unique key, to access the same WLAN, providing one-to-one authentication and strong encryption. Clients cannot eavesdrop on each other in a Private PSK system, and network access can be revoked on a per-client basis. A cloud-based proxy feature enables retailers with a cloud-based security service to route all remote web traffic through the service before sending it to its final destination.

Taking Advantage of New Opportunities

The number of people carrying a device with active Wi-Fi has reached a point at which there is a statistically significant sample of people in a store at any given time. Depending on the store and customer demographics, typically 40%-70% of all visitors are carrying a phone with Wi-Fi that can be measured. The right wireless network and analytics software can use Wi-Fi signals to accurately represent total foot traffic inside and around the store. With analytics software, retailers can transform the in-store Wi-Fi into a consumer analytics tool for optimizing retail operations and maximizing per-store revenue:

- Optimize capture rate: Optimize the capture rate to generate thousands of dollars in additional sales per day, per store. Identify shopping applications that customers use and collect numbers of walk-by customers, visits, and percentages of people that come inside the store.
- Increase duration rates: Track visit durations and identify shoppers staying longer than 30 minutes to evaluate engagements. Use this data to tailor the sales process and improve in-store operations.
- Improve service levels: Monitor line lengths, sales associate availability, and wait times to improve service levels.
- Improve engagement with customers: Analytics data lets you track traffic patterns, assess promotional effectiveness, personalize in-store coupon and "specials" when customer is in the store, and capture data for maximizing social media effectiveness.
- Enhance customer loyalty: Track visit and walk-by frequency, repeat visits, and recent visits to identify premier customers and develop program for increasing loyalty.

Aerohive Delivers An Advantage

Aerohive's mission is to Simpli-Fi access to mission-critical applications with cloud-enabled, self-organizing, and automated Wi-Fi, switching, and routing solutions.

Aerohive delivers on this mission by providing automated, secure, and cloud managed Wi-Fi solutions that meet the requirements of even the most discerning retail organizations. For example, the Aerohive architecture uses self-organizing, mesh-capable APs that require no network controllers or additional hardware. HiveOS, the operating system that underpins all Aerohive products, allows Aerohive routers, switches, and Wi-Fi access points to discover one another as they are added or removed, share information to optimize network security and performance, and dynamically adjust to network changes as needed. This capability is known as Aerohive's "cooperative control architecture." Auto-discovery and inter-AP communication can take place over the air or over the cable attached to an Ethernet switch, depending on network configuration.

In this way, wireless networks built on Aerohive technology eliminate the cost, performance, and availability issues associated with traditional controller deployments that create single points of failure, failover delays, and throughput bottlenecks. The Aerohive architecture strikes just the right balance of distributed intelligence and centralized management capabilities. Data forwarding, WLAN security, and performance-enhancement services, such as real-time packet prioritization, are distributed out to individual APs to minimize latency and to ensure that a failed WAN connection to another location won't interrupt users already on the network.

At the same time, network and system management capabilities are centralized through Aerohive's HiveManager Online Network Management Service. HiveManager Online is a cloud-based Software as a Service (SaaS) network management system for Aerohive network devices. HiveManager Online eliminates capital expenditure associated with dedicated network management appliances and shifts expenses into a pay-as-you-go model. This not only reduces the initial costs of network management, but also allows retailers to predictably grow the network to whatever size is needed. There are no management appliances to deploy, manage, or use rack space per location. Since it's a cloud-based solution, HiveManager Online simplifies an organization's ability to manage one or many locations. Network management can be done centrally using a Web browser from any location at any time. HiveManager Online offers the same simple policy creation, firmware upgrades, and centralized monitoring options as on-premises appliances without the need to deploy additional network devices. HiveManager Online is hosted within secure Tier IV SAS 70 Type II data centers, with scheduled backups and disaster recovery capabilities.

About Aerohive

People want to work anywhere; on any device, and IT needs to enable them -- without drowning in complexity or compromising on security, performance, reliability or cost. Aerohive's mission is to Simpli-Fi these access networks with a cloud-enabled, self-organizing, service-aware, identity-based infrastructure that includes innovative Wi-Fi, VPN, branch routing and switching solutions.

Aerohive was founded in 2006 and is headquartered in Sunnyvale, Calif. The company's investors include Kleiner Perkins Caufield & Byers, Lightspeed Venture Partners, Northern Light Venture Capital, New Enterprise Associates, Inc. (NEA) and Institutional Venture Partners (IVP). For more information, please visit www.aerohive.com, call us at 408-510-6100, follow us on Twitter @Aerohive, subscribe to our blog, join our community or become a fan on our Facebook page.

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