



Retail Mobile Apps

Secure, in-store wireless network access provides retailers with new ways to engage customers

While online purchases are expected to grow to 8% of total retail sales in the US by 2014 according to Forrester Research, in-store shopping will continue to account for the vast majority of sales. At the same time, online research influences 46% of total US retail sales in 2010 according to Forrester and new online social marketing is taking off - Groupon sold 445,000 coupons in one day for half off a \$50 purchase at a large apparel retailer. The mid-2010 offer was Groupon's most successful to date, and generated \$11 million in sales for the retailer according to the company. The paradigm has changed. Online advertising and research drive a rapidly growing percentage of in-store sales.

With the rapid adoption of mobile devices and smartphones, the in-store shopping experience has changed. According to Gartner, two thirds of shoppers use their smartphones for online research in-store. As a result, online reviews, price comparisons, and discounts play an ever increasing role in the consumer buying experience.

While some retailers are reluctant to facilitate access to price comparison information, the reality is that consumers have access to the information anyway. Providing secure, in-store Wi-Fi access can help retailers better understand their customers' needs and purchasing behavior, deliver personalized messages including the customer's historic purchase information and real-time discounts to encourage compulsive purchases. Sales associates can use tablets to show customers information on various products, bring up product catalogs and video reviews of products. They can check inventory at the current location or in nearby locations to ensure sales stay within the chain. Remote support organizations can find and better troubleshoot lost or broken wireless devices. Mobile employees and suppliers can more easily access core systems.

While the trend to ubiquitous access to information brings benefits to both retailers and customers, in order to take advantage of them, retailers must ensure that they retain control over the customer connectivity and that both they and their customers operate in a secure environment.

■ Hard choices

Enabling in-store marketing and taking advantage productivity increases enabled by easy to use wireless access for employees and suppliers means choosing between allowing customers access to the store's internal Wi-Fi network or running a second guest network dedicated to customer access. The former increases security risks and regulatory compliance issues while the latter increases costs thereby cutting into margins - a major roadblock to adoption of in-store guest access. Customers must not be able to introduce malware, nor be able to open a back door to store systems and cardholder data. In addition to their internal rules, retailers must ensure compliance with industry and governmental regulations in terms of both

cardholder data protection and the lawful intercept requirements of traceability of network activity for all guests on their network.

Mancala Networks makes the choice easy by protecting IT infrastructure while enabling in-store marketing access

Mancala Networks' Network Controller supports retailer's mobile marketing efforts while making it easier to extract gains in efficiency by enabling easy, secure access for mobile workers and suppliers while providing real-time visibility and control for remote support organizations.

■ Offer in-store marketing and protect corporate assets

Mancala Networks' Network Controller supports retailer's online marketing efforts by offering network access visibility and control including:

- Real-time visibility of all network connected users & devices (laptops, tablets, smartphones, POS equipment, barcode scanners, etc.)
- Web filtering (DNS firewall) provides protection from objectionable and/or dangerous content and unproductive use of resources
- Authenticated Guest Access with automated provisioning of 802.1X strong authentication for regular loyalty customers
- Simple Guest Access for new customers
- Built-in HTTP proxy for application level visibility and traceability
- Simple, easy to use standard reports
- ODBC interface for easy, detailed reporting & integration

The Network Controller ensures compliance by providing strong user authentication for loyalty customers, protection from objectionable content, and traceable web sessions for lawful intercept. Retailers may control costs by leveraging the same infrastructure for guest and in-store infrastructure in a secure configuration. The Network Controller constantly monitors for and remediates in real-time internal threats.

Unlike typical captive portal firewall solutions, authentication not only protects the store and corporate assets, but it also enables retailers to more easily open their networks to partners and to gain visibility in customer behavior that, with the right reporting, is easily turned into actionable retail marketing intelligence. Mancala Networks enables retailers to understand the most popular websites for in-store use, the days and times of usage and how much time customers are spending on the retailer's sites versus other sites. Linked with loyalty systems, retailers gain visibility into shopper's demographics, including age, gender which can now be enriched by online usage data like the type of smartphone used, the fact that they use online services which enables retailer to better target online cross-sell and up-sell campaigns and even to compare store performance regarding online campaigns.

■ Ensure PCI-DSS Compliance

The Network Controller helps retailers meet compliance with Payment Card Industry (PCI) requirements as well protect shoppers and employees from inappropriate content and malware control sites. Mancala Networks enables retailers to build a secure network, protecting them from internal threats. In addition, retailers can deny access to cardholder data systems using multiple parameters including user identity, device mac address, hostname, or IP address. With authentication seamless integrated into corporate LDAP or Active Directory servers, network usage can be traced back to the user. The Network Controller also provides ongoing detection and remediation of bad or suspect behavior based on user and device; thereby mitigating the threat posed by enabling access to unmanaged devices.

■ Enable seamless mobility

For visiting employees and third party suppliers, the Network Controller enables a way to easily ensure authenticated, controlled Network Access. Too often mobile employees visiting a store location don't have full access to the tools they need to do their jobs. Retailers can leverage the Network Controller to provide centralized authentication services for mobile employees wherever they may be ensuring optimal performance, security and productivity.

■ Summary

Customer smartphone usage along with a mobile workforce and deeper collaboration with third party resources in-store have changed the retail IT landscape. These changes provide retailers with an unprecedented opportunity to initiate an individualized, real-time marketing to customers in-store, reduce costs and increase internal productivity, but retailers must protect themselves and their customers from attacks originating within the network, which also create new challenges in terms of regulatory compliance. Simply denying access is no longer sufficient and is a danger to the long term competitiveness of retailers.

Mancala Network Controller - Enterprise network control and management solution

Built from a patented and award winning technology, the Network Controller's innovation lies in its capability to not only monitor network control flows, but to also leverage that information to increase network security and management flexibility.

The Network Controller is installed in the local network as a natural complement to routers, switches and firewalls already in place. It interfaces with the network control services (DNS, DHCP, RADIUS, SIP). Easily integrated into existing network infrastructure and solutions, it detects connected devices and users in real-time, analyses their behavior and acts automatically to optimize network security. It brings an unequalled combination of visibility and control to enterprise network environments.

The Network Controller is available in a range of software editions adapted to the specific needs of each vertical market : Enterprises, Systems Integrators, and Managed Service Providers. Optionally, the software solution may be preloaded onto a range of physical appliances.