



# Scotmid Co-operative Society Ltd.

## Scottish Retailer Chooses Aerohive for Warehouse, Headquarters, Retail Stores

### Challenges

- Needed a single wireless LAN solution capable of meeting the needs of three locations – warehouse, headquarters and retail stores
- In the warehouse, the new wireless LAN would need to allow pickers to roam freely without interference or connectivity issues
- In the headquarters, a wireless LAN would be needed to provide visiting regional business managers and other employees with mobile access to the corporate network from their laptops
- The chosen solution would need to be easy to install, easy to manage and cost-effective

### Results

- Scotmid liked Aerohive's controller-less architecture because it reduced traffic
- Scotmid is using HiveManager as a VMware appliance, allowing HiveManager to leverage the advantages of the company's existing VMware infrastructure
- For security, the company is relying on Wi-Fi Protected Access (WPA2), Advanced Encryption Standard (AES), and firewalls, which were all built into the HiveAPs
- Aerohive's Cooperative RF Management enables HiveAPs to self-manage, adjusting power levels or switching channels on the fly to compensate for congestion in different areas of the warehouse

Scottish Retailer Chooses Aerohive from the Warehouse to Headquarters to over 260 Retail Stores, as well as over 130 Semichem stores offering health and beauty supplies throughout the UK. The co-op also manages a funeral services division and a commercial and residential property division.

The Semichem outlets are supplied from a 100,000 square metre distribution centre in Livingston, about 10 miles from Scotmid's headquarters in Newbridge. Some years ago, Scotmid had inherited a warehouse management system, which included a proprietary wireless network supporting handheld scanners. In 2008, Scotmid began planning for a new management system that would incorporate a faster, more efficient, state-of-the-art voice picking application. The new system was not compatible with the legacy wireless technology, however. Scotmid would need to implement an infrastructure based on the 802.11 standard.

"The technology in retail changes constantly. Aerohive gives us a future-proof solution to meet whatever our needs will be."

—Brian Eley  
Technology Analyst, Scottish Midland Co-operative Society Ltd.

### The Challenge

While a Wi-Fi solution was an immediate requirement for the warehouse, Scotmid also recognised the need for wireless technology to support future applications at other locations as well. These included the Co-op's modern, three-story headquarters building and its retail stores. What Scotmid wanted was a single wireless LAN solution capable of meeting the needs of all three of these very different environments.

In the warehouse, inventory changes occur almost daily. Storage racks may hold toilet paper one day and aerosol cans the next, creating a challenge for radio waves. The new wireless LAN would need to accommodate the changing environment, allowing pickers to roam freely throughout the warehouse without interference or connectivity issues. The WLAN would also need to be resilient to prevent costly downtime. Also as a retailer handling customer data, the new system would need to be secure to meet Payment Card Industry Data Security Standard (PCI DSS) compliance.

In the headquarters building, a wireless LAN would be needed to provide visiting regional business managers and other employees with mobile access to the corporate network from their laptops. Scotmid additionally planned to implement wireless Voice over IP (VoIP) handsets to provide mobile telephony to those who needed it.

In the stores, Scotmid's IT group had no immediate plans for wireless applications, but wanted to ensure that whatever wireless LAN solution was chosen would support future needs. In addition to the above requirements, the chosen solution would need to be easy to install, easy to manage, and cost effective.

### The Alternatives

Brian Eley, Technology Analyst, and Peter Haley, Technology Manager with Scotmid, evaluated a number of products from different wireless LAN vendors including Colubris, Cisco, Meru, Aruba, and Aerohive.

After four weeks of rigorous testing and evaluating, the overwhelming choice was Aerohive. "We found that Aerohive met the needs of all three environments," says Eley.

### Cooperative Control Wireless LAN Solution

Aerohive was fundamentally different to the other products Scotmid evaluated. Its cooperative control access points (HiveAPs) running 802.11n didn't need multiple network controllers or overlay networks. Aerohive's management tool, the HiveManager, wasn't required for the network to function. Wireless mesh connections could create redundant paths between access points, enabling the WLAN to route around wired network failures ensuring no single point of failure within the wireless or the wired infrastructure. "To provide the required level of redundancy with the controller-based products, we would have had to buy two controllers," says Eley. High availability was important in the warehouse where downtime could impact the entire operation.

The controller-less solution was also important in the store environment. The absence of a controller meant that data from an access point at one of the stores didn't have to be backhauled to a controller at headquarters and back again to the store, which would add considerable traffic to the network. With the controller-less Aerohive solution, the local access point and its built-in firewall could continue to function, even if an ADSL link from the store to headquarters failed.

While reliability, security, cost and continued access to local resources during WAN outages were all important factors in the decision process, it was Aerohive's willingness to offer the HiveManager as a VMware appliance—even before the VMware client was commercially available—that really stood out in favour of Aerohive. "Aerohive recognised that we had invested in our VMware infrastructure," says Eley. "It allows the HiveManager to leverage the high availability and functional advantages of our VMware infrastructure and meets our disaster recovery requirements."

### Deployment

The Aerohive wireless network went live in May 2009 with 17 HiveAPs deployed throughout the warehouse. Aerohive's Smart PoE capability eliminated the need to run separate power lines to each access point, reducing the cost of installation. The expanded range of the HiveAPs resulted in additional savings. "We were able to cover the warehouse with fewer access points than we would have needed with any of the other products we looked at," says Eley.

Solutions provider Minster Logistics installed the warehouse management software and the VoiteQ Vocollect voice terminals for the voice picking application. Although this was the first implementation of the VoiteQ voice picking solution over an Aerohive wireless system, integration took place without issues. "From the moment it was turned on it just worked," says Eley.

Because security was a critical factor, Scotmid relied on Wi-Fi Protected Access (WPA2), Advanced Encryption Standard (AES), and firewalls, which were all built into the HiveAPs. "We didn't have to purchase external security systems," says Eley. Rogue access point detection, another built-in Aerohive feature, helped Scotmid's efforts to meet PCI compliance, which requires retailers to employ wireless analysis tools to identify suspect access points.

### Centralised Network Management

Scotmid has found it easy to manage the HiveAPs using the HiveManager. "I find the management excellent," says Haley. "It's easy to use. The topology section shows heat maps that are very useful for diagnosing issues such as signal strength."

With a dynamic RF environment, management could be a full-time task. However, Aerohive's Cooperative RF Management enables HiveAPs to self-manage, adjusting power levels or switching channels on the fly to compensate for congestion in different areas of the warehouse. "We've had no issues with the system since it went live," says Haley.

### What's Next?

Scotmid expects to begin deploying HiveAPs throughout its Newbridge headquarters facility very soon. Novell's eDirectory will be used to authenticate users. Mitel SprecraLink NetLink wireless phones have been chosen to support the VoIP application.

While no schedule has been set, Scotmid expects to begin deploying HiveAPs within its stores sometime in 2010. "The technology in retail changes constantly," says Eley. "Aerohive gives us a futureproof solution to meet whatever our needs will be."

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—Peter Haley

Technology Manager, Scottish Midland Co-operative Society Ltd.



Contact us today to learn how your organization can benefit from an Aerohive wireless LAN architecture.

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