# VIAVI

# Select Comfort

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**Christian Wilson | Select Comfort**
Network Administrator

## Protecting the Wireless LAN as you Sleep

Select Comfort® uses Observer® Suite to perform site surveys, find rogue access points, and enforce corporate polices for their wireless network.

The Select Comfort Corporation (NASDAQ: SCSS), creator of the revolutionary Sleep Number® bed, has over 3,000 employees, 400 retail outlets, and reported net sales of $935 million in 2012. Headquartered in Minneapolis, Minnesota, Select Comfort also has two manufacturing plants in South Carolina and Utah.

For years, network administrator Christian Wilson has used Observer to monitor, manage and troubleshoot the company's network. Recently, when Select Comfort implemented an 802.11 wireless LAN, Wilson used Observer to deploy access points, load balance wireless traffic, find rogue wireless devices and implement WLAN corporate policies.

Select Comfort's WLAN first emerged in 2002. Inventory movement transactions are generated by scanning with wireless handhelds used by employees throughout the company's manufacturing locations. These handhelds provide real time visibility of accurate inventory data. Inventory consists of materials relating to the manufacturing and engineering of the Sleep Number bed including: mattresses, foundations, pillows, and pumps. Scanning and tracking inventory is essential for the Just-in-Time inventory system Select Comfort uses to manage costs and stock levels.

"At first, our WLAN was created solely to support the devices used by employees managing inventory," said Wilson. "Over the years it has grown to support our corporate users as well. With Observer's many WLAN features, I can monitor utilization, watch for rogue access points, run usage reports, and perform baselining activities – improving the performance of our wireless network."

## A Sound Return on Investment

Select Comfort first started using the Observer Performance Management Platform in 2002, when Network Administrator Christian Wilson was looking for an alternative to Network General's Sniffer analyzer.

"I had used Sniffer for three years and started looking for alternatives. I've been a solid Observer Platform user for the past two and a half years. The Observer Analyzer Suite not only competes head-to-head with Sniffer — it also beats Sniffer in many categories. Many features you would normally pay extra for with Sniffer are included. For example, wireless support is included with the Observer Platform, whereas with Sniffer it was an additional cost. When you throw in the price difference, the Observer solutions win, hands down."

## Surveying the Network

The Observer Platform's Wireless Site Survey Mode offers scanning of multiple 802.11a/b/g channels displaying numerous wireless statistics including: frame types, management frames, speeds, signal strength, signal quality and channels in use. A channel map provides a quick view of current network status.

"The Observer Platform showed me our access points were not positioned well," said Wilson. "Signals were bouncing back and bleed was out of control. We had to turn our access points down because Observer showed there was too much power going through the airwaves. Inventory also played a factor because cardboard absorbs waves while metal is reflective. So it varies and you never get the same signal twice. With the tools available in the Observer Platform, I could find the most optimal location for the access point and ensure the antennas were positioned correctly for maximum signal strength."

## Safeguarding the WLAN from Internal and External Threats

As Select Comfort grew, the network needs evolved. WLAN access was soon expanded to desktop and laptop users. Immediately, security became a concern. Fortunately, with the Observer Platform, Wilson could monitor WLAN traffic and protect the network from security threats.

"The security scare is very real," said Wilson. "We were using WEP for encryption, but the analysis tools from the Observer Platform showed all this traffic flying through the air and it made me worry about how easy it could be for a would-be hacker with a wireless card in our parking lot to get access to our data. We upgraded to IPSEC (IP Security), a much stronger encryption. Now our data is more secure, but I can still monitor the network since the solution has the ability to monitor key WLAN statistics like signal strength and quality, regardless of encryption."

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CREATOR OF THE SLEEP NUMBER® BED

Many employees use laptops and wanted to take advantage of the corporate WLAN by bringing their laptops into conference rooms while still connected to the network. Unfortunately, a few employees decided to purchase an access point on their own rather than approach the IT department. This caused a concern for Wilson.

"With the Observer Platform, it's easy to find rogue access points," said Wilson. "I simply load the software onto my laptop and walk around the building to find which access points are transmitting. I only had six access points deployed, but the Observer Platform's Analyzer saw a lot more. Employees were purchasing units on their own and installing them below their desks. This was incredibly dangerous from a security point of view. Thanks to the Observer Platform I created a new corporate policy to help protect our network that I could easily enforce with the Analyzer I already had."

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## Using Performance Indicators for Proactive Management

The Observer Platform also monitors bandwidth utilization by comparing actual network activity with network capacity offering insight into network load. This feature lets Wilson balance WLAN traffic ensuring no device is over-burdened.

"Each of our access points can handle about 10 or 15 users and with Analyzer I can quickly see how each access point is being utilized," said Wilson. "It's easy to juggle network traffic accordingly to get the maximum throughput on each access point."

Observer's Network Trending collects and stores network statistics so IT administrators can review and analyze the data over time. With this data, baselining activities can be performed to gauge how the network is performing.

"With baselining I can tell if something is out of the ordinary," said Wilson. "At first my assumption was that our network traffic dies down in the evening, but after reviewing the Observer Platform's reporting I saw this was not the case. The more you understand traffic levels the better you can engineer your network accordingly. Every morning, I check the bandwidth utilization graph for inconsistencies. For example, if the network traffic suddenly shot up at 2:00 a.m., I know that is out of the ordinary and something I need to investigate."

Every network requires upgrades, capacity planning and long-term adjustments. With the Observer Platform's comprehensive reporting features, Wilson lets his management team generate Web reports at their leisure to understand network health.

"With this type of reporting and data, I have the evidence to persuade my manager to fund network upgrades," said Wilson. "The Observer Platform provides a great deal of value to our entire department. Once you get your management on board, getting new versions is much easier."

## No More Counting Sheep

The tools available in the Observer Platform have helped save Select Comfort money in unnecessary equipment upgrades by pointing to the source of the problem. When the network began slowing down, the immediate assumption was capacity issues but Observer's analytics showed this not to be the case.

"With the Observer Platform's reporting I could see our WLAN traffic was slowing down," said Wilson. "I thought the issue fell with our current capacity and we needed to upgrade our access points. By digging a bit deeper, we saw a new application was actually causing the delay. This application was internally developed and by adjusting the program, we were able to get throughput back to normal – without having to purchase a thing."

The Observer Platform's ability to secure Select Comfort's network traffic is the single most important benefit to Wilson.

"The knowledge and insight provided by the Observer Platform is priceless," said Wilson. "How can I quantify how much money and time we've potentially saved by locating rogue access points? The Observer Platform ensured our data wasn't susceptible to hackers – I can't tell you how much that is worth."