

Service Company Brings Wi-Fi to Commercial Truckers

IdleAire Technologies unlocks new revenue by deploying a Cisco Unified Wireless Network for its transportation customers and employees.

EXECUTIVE SUMMARY

IDLEAIRE TECHNOLOGIES

- Transportation services
- Knoxville, Tennessee
- 1341 employees

BUSINESS CHALLENGE

- Provide wireless voice and data network connectivity to both corporate offices and outdoor research and testing labs and travel centers.
- Offer wireless Internet access to visiting vendors and potential customers
- Create wireless hot spots at travel centers throughout the United States

NETWORK SOLUTION

- A secure Cisco Unified Wireless Network – composed of wireless controllers, lightweight access points, IP phones, and management software – was deployed at corporate offices.
- Separate SSIDs for employees and guests help ensure secure network access
- Standalone wireless access points are deployed at more than 100 travel centers, creating wireless hot spots

BUSINESS RESULTS

- Reporting tools in the management software help the IT staff maintain Sarbanes-Oxley compliance
- A single-vendor solution helps ensure prompt and reliable system support
- Wireless hotspots create a new revenue stream and enhance IdleAire's reputation for providing advanced services

Business Challenge

Founded in 2000, IdleAire Technologies is a unique company that addresses a problem common to commercial truck drivers all over the United States. By law, commercial drivers are required to have 10 hours of rest for every 11 hours that they spend on the road. Often, these drivers do not want to leave their cargo or their rigs unattended, so they sleep in the cabs of their trucks. Historically, drivers have let their engines idle during that resting time, in order to keep their cabs heated or air conditioned, depending on the weather. But the noise of an idling engine can result in insufficient rest for the driver, and the air pollution is significant.

IdleAire's Advanced Travel Center Electrification (ATE) system features unique electronic service modules attached to large, concentric hoses, which hang from a large truss under which the drivers park. Utilizing a simple, \$10 window adapter, the modules fit into the passenger window of a truck's cab, pumping heat or air conditioning through the hose, so that the driver can remain comfortable with the engine turned off. Available at 112 travel centers so far, the ATE service module has evolved to become an entertainment and communications unit,

too—providing amenities such as movies, television, phones, and Internet access.

A few years ago, IdleAire decided to create a secondary revenue stream: Wi-Fi hotspots for those professional drivers who did not require the full services of the ATE System, or who might want to use the Internet somewhere other than inside their trucks.

"We wanted the ability to offer service to the drivers who were not parked under our trusses," says Jon Duren, CTO of IdleAire. "Commercial truck drivers are largely relegated to travel centers whenever they need to stop on the road. Large trucks cannot pull into the nearest Starbucks and get Internet access."

Separately, IdleAire needed wireless network access for its own executives and employees, both in its corporate offices and in the corporate parking lots, where they perform demonstrations in model trucks.

"We have a highly technical executive staff," Duren says. "When you combine technology with executives, you get a staff that wants mobility. Not only did they want mobility in the company boardrooms, but they wanted to be able to set it up in the truck cabs where they test the Wi-Fi service and show it off to visitors. We also wanted to provide guest access for any vendors, partners, or professional truck drivers who came into our offices to test the system."

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— Jon Duren, CTO of IdleAire Technologies

Network Solution

To meet the wireless needs of both its executives and its customers, IdleAire deployed networking equipment from Cisco®, which was already the company's trusted provider of wired Ethernet equipment. In fact, Cisco provides the routing technology that powers the ATE systems. IdleAire valued the ability to meet all of its networking needs from one vendor.

"Having a single-vendor solution for the wired and wireless network is valuable," Duren says. "With Cisco, we could have a single vendor for a total network solution."

On the customer side, IdleAire equipped travel centers across the United States with commercial wireless hotspots in addition to the previously-deployed ATE Systems. The hotspots are composed of standalone Cisco Aironet® 1200 Series Access Points (APs) – an average of three APs per travel center. These provide reliable Wi-Fi access, 24 hours a day. Professional drivers who may not need the full services of the ATE can pay an hourly or daily fee for Wi-Fi access throughout the travel center, using the Internet to get weather forecasts, trip changes, and other crucial information.

For its employee WLAN, the company had one major requirement, based on the fact that only three of its 1341 employees are network technicians. "Due to the nature of what we do, our employees are distributed through multiple offices and R&D facilities," Duren says. "With a limited IT staff, we needed to be able to manage all the wireless access points from a single location."

To that end, IdleAire and its Cisco account team decided to deploy a Cisco Unified Wireless Network, composed of a Cisco 4400 Series Wireless LAN Controller, Wireless Control System (WCS) management software, and Cisco Aironet 1200 Series wireless access points. The access points, installed throughout three facilities in Knoxville, are centrally configured and managed by the controller, which sits at the company headquarters. The IT team used the location services inherent in the WCS to map out the best spot for each AP. The WCS also monitors the network for unauthorized access points.

"A nice part about the network is that setting up an access point requires little configuration on our part," says Greg Stooksberry, a systems administrator at IdleAire. "We can do it remotely."

On the company WLAN, executives have full access to company databases, price lists, corporate sales applications, and customer relationship management software—whether they are in a boardroom, in a research lab, or performing a demonstration for a customer. Guests (including equipment vendors and potential customers) receive basic Internet access on the WLAN. The

Cisco WLAN allows for separate service set identifiers (SSIDs) for each user group on the network, helping ensure that guest traffic and executive traffic never cross paths.

IdleAire also provided Cisco 7920 Wireless IP Phones to select mobile employees at each location. The network enables the phones to roam among access points without losing a network connection.

Business Results

IdleAire's centralized employee WLAN sees a great deal of traffic from both executives and guests, and the network has been consistent and reliable, Duren says. Ubiquitous network access allows executives to spend less time at their desks and more time with equipment vendors and potential customers. And the use of wireless IP phones prevents unnecessary cellular network bills.

The IT team appreciates the network's management features as well. IdleAire must comply with Sarbanes-Oxley-related audits and other privacy and security regulations. To that end, the company relies on the Cisco WCS' ability to detect and report rogue access points. If any rogue APs are detected, the unified network will not only block them, it will keep a record of the event in case IdleAire has to report it.

Simultaneously, the nationwide wireless hotspots have created an additional revenue stream for IdleAire. In rural areas of the country, an IdleAire hotspot is often the only public Wi-Fi available for miles. This fact provides free advertising for the company. For example, a professional driver

searching the Internet for hotspot locations before leaving on a trip will find references to IdleAire on several lists online. Now, in addition to its core, niche business model based on the ATE system, the company is also widely known as a wireless Internet service provider.

PRODUCT LIST

- Cisco 4400 Series Wireless LAN Controllers
- Cisco Wireless Control System
- Cisco Aironet 1200 Series Access Points
- Cisco Unified Wireless IP Phones 7920

"Basically, IdleAire's primary focus is selling advanced travel center electrification," Duren says. "Adding wireless Internet access was an obvious next step. It was inexpensive to add, it is an important amenity, and it is a popular service that gives our company visibility among potential customers."

Next Steps

By year's end, IdleAire plans to have approximately 200 travel center locations that utilize the ATE systems. The company hopes to provide wireless hotspot services at these centers, as well. At the same time, Duren's team is investigating the possibility of managing the hotspots with central controllers. And the IT team trusts Cisco to keep up with IdleAire's burgeoning business.

"A single-vendor network makes it easier to help ensure that software upgrades and future hardware versions work together reliably," Duren says.

For More Information

To find out more about Cisco Solutions and Services, visit: <http://www.cisco.com/go/wireless>

To find out more about the Cisco Unified Wireless Network, visit:
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