



## Mary Kay puts a New Face on Wireless

### CASE STUDY

#### CHALLENGE

Mary Kay is the world leader in direct-sales cosmetics, with revenue of more than \$1.8 billion from wholesale transactions in 2004. Based in a stunning 13-story, 790,000 square foot corporate headquarters in north Dallas, Texas, the company manages its international operations with an increasing reliance on mobile communications. Workers throughout the company now use smartphones and pocket PCs for wireless e-mail, calendaring, and web access. The company found that spotty cellular coverage inside the building was impeding productivity. They needed a system that delivered clear and reliable connections all the way from the top floor to the underground garage.



## ON THE FRINGE

Mary Kay headquarters is located on the border between two cellular coverage areas. "We're kind of on the fringes of Dallas, and we don't have good, strong wireless coverage here," said Brent Frerck, senior technical engineer at Mary Kay. "People like to take their wireless phones and PDAs into meetings away from their desks, and they couldn't get good coverage because there were a lot of dead spots and dropped calls. The wireless signal was constantly being handed off between cell towers."

Building coverage was better for Nextel subscribers because that company had installed a signal repeater system previously, but most Mary Kay employees were not Nextel subscribers, so it didn't do them any good. And if coverage within the building was a problem, it was non-existent in the facility's 4-level underground parking garage, where the corporate photocopying facility was located.

## EXPANDING COVERAGE

To remedy the problem, Mary Kay looked at several cellular carriers for its primary coverage contract. Naturally, better coverage was a top requirement on the list. Eventually, AT&T Wireless (now Cingular) offered to eliminate coverage problems with an InterReach Unison® in-building system.

In the third quarter of 2005, Cingular installed a micro base station in the facility's network operations center along with an Unison system. The system includes 4 Main Hubs, and then propagates wireless signals via fiber to 10 Expansion Hubs located on every other floor of offices, every other parking level, and in the lobby. From the Expansion Hubs, the signals move over standard Cat-5 cable to Remote Access Units (RAUs) and approximately 80 distributed antennas to provide pervasive coverage. The Unison system supports 850MHz and 1900MHz voice and EDGE data services for Cingular.

In all, it took only ten days to install the cabling, RAUs and antennas. IDEX, the contractor that installed the cabling, was a trusted contractor that Mary Kay's IT staff had used for all of its networking needs, so Frerck had high confidence that they would be fast and non-disruptive, and

they were. IDEX was able to speed deployment by using existing fiber in the building risers to connect the hubs.

The only concern was about interference with the existing Nextel repeater system. "I was worried that we'd turn up the Cingular base station and the Nextel network would go down," Frerck says, "but it's on a different frequency so there was no problem."

The Unison system performed flawlessly from the beginning. We're very pleased with how the project came out," says Frerck.

For Mary Kay, the system is transparent. Cingular manages the Unison system from its own operations center, and thanks to Unison's active architecture and extensive operations and maintenance capabilities, the carrier receives instant alerts so it can respond quickly when there's a problem with an antenna or another part of the system.

## BETTER COVERAGE MEANS HIGHER PRODUCTIVITY

From the moment it was activated, the in-building system began delivering results. Dropped calls and dead spots disappeared, and employees found that they could take calls or check email anywhere.

"Now," says Frerck, "I can walk out of my CIO's office on the 13th floor, get on my cell phone, and take the elevator all the way to the lobby and then down to the fourth level of the underground parking garage without dropping the call."

Frerck and the IT staff aren't the only ones who noticed the improvement. "It has allowed our employees to be more effective and do what they need to do without having to stand in one place where the signal is strong enough," he says. Pervasive coverage means communications on the move. For example, the vice president of human resources was expecting a call but needed to leave the office, and she was worried about getting coverage on her phone in the garage. When the call came in loud and clear as she reached her car, however, she became a believer in in-building wireless.

## ADDITIONS AND FUTURE UPGRADES

After the initial installation, some tweaks were necessary. Users found that calls were still dropping as they were in their cars on the ramps between levels in the parking garage, so a few more antennas were added to resolve the problem.

Overall, however, the in-building system has made on-the-go communications possible, and has also given Mary Kay a back-up communications channel. "We like the idea that we can use our cell phones in disaster situations when our electrically powered desk phones might be down," says Frerck. "We can still get a cellular signal and use data cards if necessary to get out to the Internet." In addition, the pervasive cellular coverage allows Mary Kay's IT technicians to move around and communicate anywhere in the building if the network goes down.

In the future, Mary Kay plans to upgrade its cellular data service to HSDPA, so it can enjoy transfer speeds of up to 1.5 Mbps. The active electronics in the in-building system will enable the upgrade without changes to system electronics or antenna placements. In the mean time, coverage-related impediments to employee and IT staff productivity have been eliminated.



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