Cisco Aironet Wireless LAN implementation at Squire Mech triggers new collaborative work style

M&E consulting services leader to replicate successful deployment in Singapore office in Malaysia and China

Established in 1977 to provide consulting mechanical and electrical engineering services, Squire Mech Pte. Ltd. is a local leader in its field, providing a complete range of services for projects ranging from residential and commercial developments to the refurbishing and retrofitting of existing buildings. The company has an associated company in Kuala Lumpur, Malaysia, and is looking at establishing a direct presence in Shanghai, China.

Squire Mech strives to deliver to its property owner clients highly reliable, efficient and maintainable M&E systems that meet their operational needs, not just statutory requirements. The many local and international awards that it has won for its work attest to this customer-centric focus.

The company's approach to providing IT resources to its internal customers is no different, says Mr. Ng Eng Kiong, Managing Director.

"We moved to our present premises three to four years ago. Before the move, we had two wired LANs: one for the production team that works on the design plans using desktop PCs, and another for the project engineers, many of whom do site work and are equipped with notebook computers. Transporting data from one network to the other was cumbersome. When we moved to our new office, we decided to merge both networks into one."

At that time, Wireless networking was just beginning to take off, so we decided to just install a wired LAN based on Cisco Systems technology.

As staff got used to working with computers and exchanging information over the common network, it wasn't long before another end-user need became apparent – mobility within the office premises.

Clear need for mobility
"In M&E consulting, it's not just the knowledge of a particular individual or a group. There's a lot of collaboration, with input and reviews by peers and senior staff. Whenever our engineers got together to discuss projects in a meeting room or a conference room, there would be the inevitable hunt for a free network access point. There was a clear need for mobile access," recalled Mr. Ng.

As wireless LAN products began to proliferate in the market and with the technology stabilizing, Squire Mech decided to complement their wired LAN with a wireless one.

The company evaluated several wireless LAN providers and eventually chose Cisco. The choice was based on several factors, according to Mr. Ng. These include Cisco's leadership position, stability and staying power; its clear product and technology roadmaps; and the seamless integration between the Cisco Aironet wireless solution and the Cisco-powered wired network.

The wireless network went live end-2000 after a very rapid implementation phase – and the take-up rate was astounding.

"Just three months into its use, there was a surge in usage and requests for wireless access. When we first deployed the wireless LAN, usage was driven just by the convenience of mobility. After a while, many other ways of using the wireless network cropped up that we could not have envisaged. It has now become more than a convenient way to access the corporate network, it has led to new and more productive ways of working."

Design cycle shrunken by half
To begin with, there's now more discussion between the production team and the project engineers. One consequence of the closer collaboration is a compressed design cycle. Previously, the production team would pass on the draft M&E design to the engineers for review only after the plans were completed. Now, the plans are reviewed as they are being drawn up, cutting the design cycle by half.

"It used to take us about two months to get a complete M&E design done. Now we wrap everything up in just a month," said Mr. Ng. "In addition, we can now prepare a full tender document in two weeks; we used to take 3 to 4 weeks."

The wireless LAN has been particularly useful for the project engineers, many of whom bring their notebooks to site meetings. They thus do not have to rely on clerical and secretarial staff to take down the minutes of meetings and other paperwork. Squire Mech's clients have benefited, too, as the wireless LAN allows the project engineers to easily download and present to them updated proposals and design drafts.

Given the large size of M&E design files, one would expect the wireless LAN to slow down the entire network. But this has not been the case, said Mr. Ng.

"There's no noticeable separation between the wired and wireless portions of our network. As they are both based on Cisco technology; they appear as one single network to our users. It's highly reliable and, after almost two years of use, we have yet to run into a problem that requires technical help from Cisco. In addition, there was no need for additional IT headcount and any additional maintenance costs are minimal."

Fture rollout
Having benefited greatly from Cisco wireless networking technology in its Singapore office, Squire Mech is now looking at replicating the successful deployment in its

Malaysian office next year. It will also be adding at least one more wireless access point to its Singapore office to improve network coverage at the periphery areas of its 12,000 square-foot premises.

"We are also looking at some mobile applications that will allow us to further leverage our wireless LAN capabilities. Some of our clients are working with construction industry specialist Buildfolio on developing software for the Palm Pilot. When that's ready, we hope to ride on this application, and others like it. Likewise, we may be collaborating on ProjectWeb, a local industry initiative for architects, consultants and contractors to access, through the Web, information stored on their common client's server," said Mr. Ng.

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