



THE COMPUTERWORLD HONORS PROGRAM

CASE STUDY

LOCATION:
Edmonton, Canada

YEAR:
2006

STATUS:
Laureate

CATEGORY:
*Media, Arts and
Entertainment*

NOMINATING COMPANY:
*Siemens Information +
Communications Networks Inc*

ORGANIZATION:

West Edmonton Mall

PROJECT NAME:

WEMiSphere: West Edmonton Mall Goes Wireless

Summary

As the largest shopping and entertainment center on the planet and with visitors from around the world, West Edmonton Mall (WEM) executives are continually looking for ways to improve business and offer the biggest and the best to their visitors. WEM's recent launch of its WEMiSphere Wi-Fi initiative has taken wireless technology within the entertainment/retail industry to an entirely new level. With 60 highly flexible and scalable Siemens HiPath Wireless Access Points installed and another 70 planned, WEM is the world's largest Wi-Fi enabled shopping center. What does this bring to the business's bottom line?—significant revenue generation and a strong competitive edge, offering full wireless access to tenants and visitors, increased security, curb-side check-in at the adjoining hotel, location-based marketing, comparison shopping in real-time and much, much more.

Introductory Overview

WEM, located in Edmonton, Alberta, Canada, is the world's largest entertainment and shopping center and Alberta's most popular tourist attraction. The mall features more than 800 stores and services, 110 eating establishments, and eight major attractions including a waterpark and a hotel. The enormous structure spans the equivalent of 48 city blocks and hosts some 22 million visitors each year.

The mall's management is committed to providing quality shopping, hospitality and entertainment experiences for visitors. A big part of that effort involves having the latest communications technology available to provide convenient voice and data connectivity for guests, shoppers, tenants and employees.

To continue attracting a large number of visitors from around the world and support its guests and many tenants, WEM decided it needed to invest in the technologies that many people are coming to rely on, including providing wireless communications capabilities throughout the mall. The vision was to enable visitors, hotel guests, employees and tenants the ability to communicate, access the Internet and download files regardless of their location.

WEM looked at wireless technology from all the major players in the marketplace and selected



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the Siemens HiPath Wireless portfolio, a centrally deployable 802.11 wireless local area network (WLAN) system. The product is deployable over any data or VoIP network and enables fast and secure roaming across access points throughout an enterprise environment.

Using the Siemens HiPath Wireless system, West Edmonton Mall launched WEMiSphere, a WiFi service that provides high-speed wireless Internet access. The system was deployed initially throughout the adjoining Fantasyland Hotel, as well as in the mall food court and waterpark. The mall has launched an awareness campaign to let tenants know about the wireless capabilities so they can easily connect to the network and is adding new access points each month.

Benefits

The implementation of WEMiSphere via the HiPath Wireless system is delivering multiple benefits for WEM. WEMiSphere has provided visitors, guests and staff with the freedom to move throughout the facility without losing WLAN connectivity. The hotel also has complete wireless service, so guests can have access to the Internet from their rooms, the conference center, lobby, ballroom, dining areas and lounge.

WEMiSphere is expected to help attract not only individuals who want mobility, but organizations that run business conferences where wireless connectivity is a critical component and an integral part of the event. Customers increasingly request rich media services when they hold an event or conference, including multi-party video conferencing. WEM's service is capable of delivering the bandwidth needed for both wired and wireless clients and is able to deliver TV-quality streaming, video on demand, and two-way portable video phone and video conferencing—all wirelessly throughout the facility.

“Wireless communications allows users to be in touch no matter where they are,” said Joseph Schuldhaus, vice president of information technology at West Edmonton Mall. “This system makes it easy for guests to roam around and use the network anytime they want to update files, read emails or communicate.”

The wireless network is an example of the Siemens LifeWorks concept, which describes the new intersection between public and private communication services. LifeWorks weaves together all the tools people use to communicate, both at work and in their private lives.

More than just providing connectivity to WEM visitors and tenants, the Siemens HiPath Wireless system has enabled the mall to bring in significant revenue generation and a strong competitive edge, increased security, curb-side check-in at the adjoining hotel, location-based marketing and online comparison shopping in real-time.

Overall, the network has enhanced the everyday operations at WEM. For example: the mall's personnel are able to leverage WEMiSphere to deliver wireless backhaul to areas that are harder to reach with a wired solution. Smart Building systems, such as roof top chiller units for heating, ventilation and air conditioning, are now requiring LAN connectivity. The WEMiSphere wireless service provides a secure network that carries the mall's control data across the airwaves to and from any roof top area at WEM. Additionally, maintenance and security personnel are able to carry portable computers to remote areas and remain connected to the network.



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The Importance of Technology

“Everyone is recognizing that we’re becoming a wireless society,” Schuldhaus said. “People want information no matter where they are, and they want to get that information quickly and at an affordable cost.”

At the same time, Schuldhaus and his team realized that the airspace within facilities such as shopping malls can actually generate revenue for the companies who own the space. “We need to start thinking in terms of cubic feet of airspace and how we can use it,” he said. “We’re moving to the point where a large campus environment like a shopping mall can leverage this space and work with telecommunications companies to ensure that the best solution is available for data, voice and video.”

Furthermore, tenants at the mall increasingly were looking for wireless communications capabilities to help enhance their business processes. Some tenants started installing WiFi systems on their own. A mall-wide wireless service helped attract new tenants to the mall and enabled tenants to use a single system for their wireless needs.

One example: an optometrist based within WEM conducts business over the network while his wife manages the shop’s accounting by laptop as their children explore nearby amusement venues. Such services are all part of delivering the complete mobile package that has become increasingly more common in today’s competitive and digital business world.

Originality

Communication plays a critical role in today’s technology-driven world. Payphones, Internet cafés, PDAs, cell phones and the like surround us. Communication often governs how and where people work, commute, eat, play, sleep and even where they vacation. It has become a deciding factor in how we live our lives.

WEM understands the role of communication in today’s world. The mall’s executives are constantly striving to create a positive, productive environment that attracts repeat visitors and generates a sense of community. As the largest shopping and entertainment center in the world and with visitors from around the globe, WEM executives are continually looking for ways to improve business and how to offer the biggest and the best to their visitors.

In fulfilling this creed, the mall’s IT administrators started looking for a way they could heighten customers’ experiences and fulfill their tenants’ needs, and they found it. The mall that already offers the world’s most diverse shopping, entertainment and lodging options has unleashed the power and convenience of technology to improve an already extraordinary visitor experience. The solution? Full wireless capability.

WEM’s recent launch of its WEMiSphere Wi-Fi initiative has taken wireless technology within the entertainment/retail industry to an entirely new level. With 60 HiPath Wireless Access Points installed and another 100 currently being installed, WEM is the world’s largest Wi-Fi enabled shopping center.



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Success

Among the many benefits received from the wireless network, the mall has employed its network to help with security operations. Security personnel on foot or in patrol cars use wireless devices to monitor images from any of the 200 new digital security cameras placed throughout the mall. Some 10 terabytes worth of images are accessible from devices such as tablet PCs.

The wireless technology has also helped attract visitors who are on vacation or spending leisure time at the mall but still need access to their office, Schuldhaus said. One example: a businessman who recently visited the waterpark with his family was able to take part in a three-way conference call using voice over IP on his WiFi phone while seated water side. The call was so clear that the people on the conference had no idea he was at a waterpark and watching his children play.

Moreover, people who work at the mall and use the Internet for research, online banking and checking email messages can now do these things while on their breaks. Mall tenants who don't currently have Internet access in their stores can also access the Web via the system.

WEMiSphere is fully operational in most areas of the mall, and WEM expects that it will be available throughout the mall by mid-summer 2006.

In the future, the wireless network will be able to provide location-based marketing capabilities. For example, a shopper in a particular section of the mall using a PDA or other device will be notified about a special sale being offered by a retailer in that area of the mall. Location-based marketing will help drive additional revenue for the mall and its tenants.

Difficulty

With a budget of \$500,000 and the equivalent of 48 city blocks to cover, WEM needed to figure out the most cost-effective way to implement a grand-scale, secure WiFi network that could be made available to its more than 800 tenants and 22 million annual visitors. They also needed to ensure that the network would always be available to users and be scalable to support future growth.

WEM executives studied their options by looking at every wireless technology from the major competitors in WiFi industry and selected the Siemens HiPath Wireless portfolio as the most cost-effective, scalable and easy-to-work-with WiFi network. What they found was a product that was deployable over any data or VoIP network with the ability to enable fast and secure roaming across access points throughout an enterprise environment.

WEM's network is accessible across 48 city blocks—from anywhere within the hotel to several major attractions, such as World Waterpark, Sea Lions' Rock, Ice Palace, Bourbon Street and two large food courts. When the network is completed later this year, wireless access will be available throughout the entire complex, including hundreds of stores and eating establishments and eight major attractions. Many of the mall's 22 million visitors each year will use the wireless network for a variety of reasons—to access email, stay connected to work, find the best sales, locate a destination and much more.