

Samsung Delivers Greater Wi-Fi Coverage and Robust Connectivity for Large-Scale Events

OVERVIEW

Business Issue

Looking to double its 1.5 million annual visitors, Cleveland's International Exposition Center, also known as the I-X Center, turns to its technology partner the Business Network Team (BNT) to undertake a major strategic overhaul of communications and wireless network infrastructure. The I-X Center needed the right technology to support not only inter-employee communication needs, but also the avalanche of bandwidth-hungry wireless devices coming from exhibitors and attendees.

Samsung Solution

The I-X Center partnered with Samsung and the Business Network Team (BNT), a Samsung Authorized Partner to deploy a redundant WEC8500 wireless access point controller, approximately 180 WEA303e wireless access points using the TerraWave's 2.4/5 GHz, 6 dBi patch MIMO antenna. Furthermore, 40 WEA302 wireless access points were also installed for conference rooms and administration areas, as well as Samsung Ubigate switches to provide IP connectivity and power over Ethernet (PoE) for the access points. Part of the strategic move included an upgrade its current phone system with a Samsung OfficeServ 7400 system, complemented with We VoIP and Xchange for Samsung Applications.

Results

The I-X Center, now powered by Samsung, provides a reliable wired/wireless connectivity throughout its conference center, meeting rooms, ballroom and its 1 million-square foot exhibition floor for thousands of mobile devices visitors and exhibitors bring to the showroom. By offering visitors with a seamless wireless experience and greater floor coverage for voice and data, the I-X Center further solidifies its commitment to providing not only new, popular consumer shows, but also premier, world-class services and amenities.



THE CUSTOMER

IX-Center

The International Exposition Center, also known as the I-X Center, is a convention and exhibition center located in Cleveland, Ohio with a total space of 2,200,000-square-foot (200,000 m²) including over 1,000,000 square feet (93,000 m²) total square feet of exhibition and conference space, making it one of the largest meeting, convention, and exhibition centers in the United States.

Attracting over 2 million visitors each year, this 2.2 million square foot complex provides over one million sq. ft. of presentation space, beautiful 16,000 sq. ft. grand ballroom, 26 dedicated meeting rooms and state-of-the-art transitional theater with elevated telescopic seating for up to 2,600 guests.

REQUIREMENTS OVERVIEW

- One Million Sq. Ft of show floor Space
- Design to support up to 10,000 transient users
- Support for both exhibitors and attendees
- 20-30 Breakout Conference rooms
- Ceiling heights ranging from 45' to 65' on show floor
- Reassessment of an aging communication platform
- Support internal administrative staff
- Support future implementation of WE VOIP
- Completely redundant solution



THE CUSTOMER NEED

Higher speed and better coverage for large-scale events

Attracting millions of visitors for over 25 years, the I-X Center has been the premier venue for consumers and trade events such as the Greater Cleveland Automobile Dealers' Association – the fifth largest auto show in the country, Fabulous Food Show, I-X Christmas Connection, and the long running favorite, I-X Indoor Amusement Park, the world's largest indoor amusement park.

It was evident how technology has become an integral part of exhibitors and visitors attending the show floor. The I-X Center needed to make the right technology choices to accommodate the needs of organizers and quickly adapt to technology changes. With a well-tracked history of investing in infrastructure, the I-X Center team turned to their long-time trusted advisor, the Business Network Team (BNT) to look into the state of their current network and evaluate their wired/wireless network needs.

The initial assessment reported an aging communication platform, coupled with unstable and limited Wi-Fi service. It was immediately agreed that the I-X Center needed to redesign and optimize its current network for bandwidth intensive applications –essential to its in-venue experience, and connectivity support for public safety as well as back-office functions for employee productivity and collaboration.

It was about managing effectively large concentration of mobile devices trying to access the network at the same time, using different applications with different types of devices. The team wanted to make sure their exhibitors/concessionaires were able to connect multiple devices to run their presentations and be able to send/receive data as they engaged with their customers.

THE SAMSUNG SOLUTION

An all-Samsung integrated solution

The list of requirements included reliable Wi-Fi connectivity for on-the-go employees, exhibitors, and attendees. It was also needed a quick and hassle free replacement of legacy components of the infrastructure in place with a seamless transition to the Samsung solution with minimal downtime.

The Business Network Team (BNT), a Samsung Authorized Silver Partner, proposed an all-Samsung integrated network infrastructure. A Samsung OfficeServ 7400 communications platform was deployed as the backbone for seamless integration of IP desk phones and mobile staff. To further enhance collaboration and communications in such a large work environment, such as Samsung WE VoIP and Xchange for Samsung applications were installed in the system and mobile phones. The WE VoIP mobile app provides with staff the ability to take advantage of the Wi-Fi connectivity, turning mobile devices into a full-featured Samsung IP Phone, saving mobile minutes while in the network, while always using their extension wherever they go. Meanwhile, Samsung Xchange added real-time visibility of employee's availability.

As for the Wireless LAN infrastructure deployment, two (2) Samsung WEC8500 access point controller (APC) were installed for redundancy, paired with 180 access points carefully distributed throughout its one million sq. foot of

floor space. In order to compensate ceiling heights ranging from 45' to 65' on the show floor, BNT complemented the deployment with TerraWave's 2.4/5 GHz, 6 dBi patch MIMO antennas with ruggedized radome to enhance data rates and network capacity. Samsung Ubigate switches were also included to provide IP connectivity and power over Ethernet (PoE) for the access points.

Approximately 40 WEA302 wireless access points were also deployed for the conference rooms and administration areas to handle slighted smaller concentration of guests. This dedicated meeting and banquet area is especially suited for smaller events such as weddings, charity events, proms, and mid to large corporate events, seating approximately 250 to 800 people.

"Our main objective was to design a Wi-Fi network that provides coverage for one of the largest show floors while being able to handle thousands of devices requiring Wi-Fi bandwidth," said Mike Profant, President of Business Network Team. "We also needed to provide the I-X Center with one overall technology solution, allowing multiple technologies to co-exist and work together. Deploying an all Samsung family of products, from Wi-Fi service, to business telephone system, to Security Cameras, to tablets and cell phones delivered a fully functional Samsung network. Simply put, only Samsung could deliver this environment," added Profant.

Quick Profile:
**WIRELESS ENTERPRISE
PRODUCT PORTFOLIO**
As used by I-X Center



**REDUNDANT WEC8500 WIRELESS
ACCESS POINT CONTROLLERS**

**ACCESS POINTS WEA303e
WITH TERRAWAVE ANTENNAS:**
Approximately 180 WEA303e wireless access points using the Terrawave 2.4/5 GHz, 6 dBi patch MIMO antenna giving the customer a higher level of control over the RF environment that standard Omni antennas

ACCESS POINTS WEA302.
Approximately 40 WEA302 wireless access points for the conference rooms and administration areas

**WE VoIP & XCHANGE FOR
SAMSUNG APPLICATIONS**

AUTHORIZED SAMSUNG PARTNER

Business Network Team (BNT)
BNT provides voice and data, network architecture, and telecommunications services. For more information, please visit www.bnnteam.com





THE RESULTS

Greater Coverage, Better Capacity

The I-X Center is now able to provide tradeshows with a reliable and predictable Wi-Fi experience, while providing staff and back-office employees with a complete and integrated mobile communications solution throughout their facility. Key benefits include:

EXTENDED COVERAGE: One Million Sq. Ft of show floor Space, plus its additional 16,000 sq. ft. of grand ballroom, 26 dedicated meeting rooms and state-of-the-art transitional theater with elevated telescopic seating.

RELIABLE WIRELESS CONNECTIVITY: Wi-Fi support for thousands of transient users, both exhibitors and attendees, establishing a true connected environment where visitors can take and share their experience anytime, anywhere, while exhibitors engage them, in real-time, with on-site information, offerings and a wide range of other promotional activities.

IMPROVED PRODUCTIVITY AND SERVICE LEVELS: More productive and mobile employees through the usage of their WE VoIP and Xchange for Samsung applications, which assures communications and collaboration among employees, regardless of where they are, especially in areas with no Wi-Fi connectivity such as the basement.

PERFORMANCE AND SCALABILITY: the I-X Center is now able to effectively manage a large concentration of different mobile devices trying to connect at the same time to the network.

SIMPLICITY: Samsung and BNT provide now the I-X Center with the ease and simplicity of a total solution, all-integrated and single source for all their business needs.

“Our objective is to provide the perfect environment to captivate visitors and create long-lasting business relationships through memorable in-venue experiences.”

— Mike Profant
President, Business
Network Team



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THE NEW
BUSINESS
EXPERIENCE



About Samsung Telecommunications America

Samsung Telecommunications America, LLC, a Dallas-based subsidiary of Samsung Electronics Co., Ltd., researches, develops and markets wireless handsets, wireless infrastructure and other telecommunications products throughout North America. For more information, please visit www.samsung.com.

About Samsung Electronics

Samsung Electronics Co., Ltd. is a global leader in semiconductor, telecommunication, digital media and digital convergence technologies with 2011 consolidated sales of US\$143.1 billion. Employing approximately 206,000 people in 197 offices across 72 countries, the company operates two separate organizations to coordinate its nine independent business units: Digital Media & Communications, comprising Visual Display, Mobile Communications, Telecommunication Systems, Digital Appliances, IT Solutions, and Digital Imaging; and Device Solutions, consisting of Memory, System LSI and LED. Recognized for its industry-leading performance across a range of economic, environmental and social criteria, Samsung Electronics was named the world's most sustainable technology company in the 2011 Dow Jones Sustainability Index. For more information, please visit www.samsung.com.

About Samsung Wireless Enterprise™

Samsung Wireless Enterprise™ offers communication solutions specially designed to help businesses transform their traditional fixed communications infrastructure into a mobile-ready wireless network. From optimized WLAN infrastructure, enterprise-grade applications, and robust phone systems to full-featured IP phones, gateways and routers; Samsung Wireless Enterprise™ portfolio provides a dynamic system architecture that scales to accommodate growth and meets a variety of business communications needs. Samsung Wireless Enterprise™ enables businesses to provide efficient work environments anywhere, anytime with optimized, secure and seamless mobile voice and data experience. For more information, please visit www.samsung.com/business/we.

About Business Network Team (BNT)

Business Network Team (BNT) is an Authorized Samsung Partner that provides personalized experience in voice and data services, network architecture, and telecommunications through the power of industry knowledge, backed by the products and services offered by the largest telecommunications companies in the world. Through world-class support and industry recognized training, BNT has specialized access and knowledge to industry information, tools, and resources. For more information, please visit www.bnteam.com

About Ventev Wireless Infrastructure

Ventev Wireless Infrastructure (www.ventev.com), a division of TESSCO Technologies Inc., (NASDAQ: TESS) designs and manufactures solutions that deploy, protect, power, and improve the performance of every type of wireless network: Wi-Fi, DAS (distributed antenna systems), cellular, mesh and two-way. The company's extensive line of products such as antennas, enclosures, cable, and solar-powered base stations support these networks and their applications both indoors and outdoors. Ventev Wireless Infrastructure's three product lines are: TerraWave Solutions (Wi-Fi enclosures, antennas and cable assemblies); Ventev (integrated power and outdoor enclosure solutions); and Wireless Solutions (base station infrastructure including towers, site hardware and grounding).