

## Ruckus Wireless Selected by One of Nation's Largest High Schools for Massive 802.11n Wi-Fi Project

### **Lyons Township High School Migrates to Ruckus ZoneFlex Smart 802.11n Wireless LAN System to Ensure Reliable, High Speed Connectivity across 105 Acres and 1.3 Million Square Feet of Space**

**SUNNYVALE, CA October 21, 2009** – Ruckus Wireless™ today announced that Lyons Township High School (LTHS) District 204, ranked among the top public high schools in the nation according to U.S. News & World Report, has selected Ruckus Wireless to supply advanced indoor/outdoor 802.11n wireless LAN products and technology.

The new high-speed 802.11n wireless network, which includes [250 ZoneFlex dual-band 802.11n Smart Wi-Fi access points](#) (APs) and [redundant ZoneDirector 3250 Smart wireless LAN \(WLAN\) controllers](#), replaces the previous 802.11g infrastructure – to deliver a four-fold increase in Wi-Fi range and performance.

The school's Tech Services staff is in the process of deploying the new Ruckus wireless network to support a variety of LTHS's facilities, including more than 200 classrooms, multiple gymnasiums, auditoriums, libraries, cafeterias, athletic fields, field houses, aquatic centers and administrative office space sprawling across more than three city blocks and 1.3 million square feet. The network is designed to support education programs for the school's nearly 4,000 students, as well as faculty, guests and visitors that need to connect to the school's computers, video projectors, printers, laptops and tablet PCs.

"The move to 802.11n on such a large scale looked like a daunting and expensive task," said Edward Tennant, director of technology for Lyons Township High School District 204. "We weren't just waiting for 802.11n to be ratified. We were waiting for an 802.11n solution that could support multimedia, provide unified indoor and outdoor coverage under a single management structure and that we could deploy and manage easily and at a reasonable cost. This wish list was hard to fill."

According to LTHS, after evaluating WLAN systems from Xirrus, Aruba Networks, Cisco, HP and AdTran, LTHS chose the Ruckus ZoneFlex 802.11n system because of its ability to extend Wi-Fi signal coverage with fewer APs, unique support for multimedia, ease of installation and management and its lower overall cost of ownership.

For LTHS, reliable wireless connectivity is essential for curricular instruction within the classroom, allowing teachers greater mobility and the opportunity to better interact with students from anywhere within the classroom.

"Wi-Fi gives teachers much more flexibility to instruct students because they are not tethered to the front of the classroom or lab. They can write or annotate a presentation or access information on a tablet PC and share it directly with a student," said Tennant. "But the big problem is the expectation for high-speed, reliable connections everywhere with Wi-Fi. We've found that 802.11n technology

alone wasn't the be-all, end-all panacea. The Ruckus implementation takes 802.11n where we needed it to go – farther, faster and with fewer APs.”

IP-based video streaming was another important application that LTHS needed to support over Wi-Fi. LTHS is the “injection site” for the local origination for the area’s cable systems, connecting to AT&T’s U-Verse IPTV service and Comcast. Unlike other 802.11n wireless alternatives, the Ruckus ZoneFlex system uniquely supports the distribution of IP-based video through its patented beamforming and quality of service technologies, which is ideal for LTHS’s plans to expand the use of its Wi-Fi infrastructure.

### **Wi-Fi at School, Then and Now**

With some buildings originally constructed in the late 1800s, over the years multiple expansions to its campuses created an “unfriendly environment for Wi-Fi.” Concrete floors, wire mesh in the glass above metal lockers and walls ranging from a few inches to several feet thick caused detrimental attenuation for Wi-Fi signals.

LTHS’s previous Wi-Fi system, based on Proxim 802.11g Orinoco APs and managed with Aruba’s AirWave WLAN management system, was unable to cope with this challenging environment and the changing traffic patterns that increasingly favored multimedia. This forced LTHS to deploy an AP in every room to achieve adequate coverage and performance.

“We set up our original Wi-Fi network almost four years ago and quickly learned that we would have to install an AP per classroom to support our teachers using the new tablet PCs. It worked okay, but as we tried to add more classrooms or additional devices, management and scalability were real problems,” said Tennant.

Despite these challenges, LTHS IT staff found they are able to swap out legacy 802.11g APs for Ruckus ZoneFlex 802.11n products at a ratio of 3 or 4-to-1 due to the new AP’s extended range and coverage. Unlike conventional 802.11n technology, Smart Wi-Fi from Ruckus Wireless advances the state of wireless with patented RF routing techniques and sophisticated meshing capabilities. LTHS is now able to deploy a smarter Wi-Fi infrastructure in half the time, at half the cost, while benefiting from three times the performance over conventional alternatives.

“We looked at a lot of gear and found the Ruckus system was the only one that could easily adapt to the changing Wi-Fi environment while supporting multimedia flawlessly,” said Tennant. “We also needed a unified system that could be deployed indoors or outdoors with or without Ethernet cabling. Outside of Ruckus, it was difficult to find a supplier that could provide a comprehensive system within a simple and affordable solution.”

Redundant ZoneDirector 3250 Smart WLAN controllers will manage hundreds of dual-band 802.11n ZoneFlex 7962 Smart Wi-Fi access points throughout the two campuses. The controllers provide sophisticated local management capabilities for smart meshing, advanced security and guest access.

After completing its indoor WLAN 802.11n deployment, LTHS will use Ruckus Smart Mesh Networking technology to deliver Wi-Fi connectivity to athletic fields and aquatic centers. Outdoor Ruckus ZoneFlex 802.11n APs can be easily deployed with no Ethernet cabling available and meshed to indoor

ZoneFlex APs. This eliminates the expense of pulling cable to remote locations, enabling LTHS to extend Wi-Fi to areas where it has been impossible to provide service cost-effectively.

“All of this performance at such an affordable price when combined with the simplicity of the system made the Ruckus Wireless system the best value at the lowest overall total cost of ownership. We determined that if we had bought the same number of APs offered by competitors – with no controllers – it would have cost as much as the entire Ruckus system. When you go back and add in the cost of the controllers, AP licenses, feature modules and other incidentals, competitive offerings came at an unfathomable cost,” concluded Tennant.

#### **About Lyons Township High School**

Founded in 1888, Lyons Township High School is a four-year comprehensive high school located in the western suburbs of Chicago. Accredited by the North Central Association of Colleges and Secondary Schools and by the Illinois Office of Education, LTHS services all or parts of 11 different communities with nearly 4,000 students and approximately 500 faculty and staff. LTHS operates two campuses about one mile apart, the freshmen and sophomores attend South Campus, and the juniors and seniors attend North Campus. LTHS is one of only 58 Illinois school districts honored with a 2009 Bright A+ Award and was named a Silver Medal Winner in U.S. News & World Report's America's Best High Schools report, ranking LTHS among the top high schools in the nation.