

Higher Education

The University of Georgia
Center for Continuing Ed

University of Georgia's Center for Continuing Education Replaces Wired Network with Smart Wi-Fi from Ruckus

Located on the campus of the University of Georgia (UGA), the Georgia Center for Continuing Education Conference Center and Hotel is considered the world's largest and most comprehensive university-based conference center. Encompassing 300,000 square feet, the Georgia Center is a 200-room hotel, five-floor, 50-year old conference and housing facility that includes two auditoriums (375 and 600 seats), 18 conference rooms, five executive board rooms, a state-of-the-art computer lab, two restaurants, exhibit space and spacious banquet facilities.

UGA's Continuing Education IT staff had wanted to provide ubiquitous, free Wi-Fi to hotel guests and visitors for years. But rewiring or adding more wires wasn't an option and finding a Wi-Fi system that could cost-effectively replace the hotel's wired cable network while delivering stable and long-range connections just wasn't viable.

Years ago, the Georgia Center's hotel was wired with a coaxial cabling. The coax network was used to provide cable TV as well as cable modems in every hotel room for Ethernet connectivity. This proprietary cable system was managed by a third-party maintenance company at a cost of nearly \$3.00 a month per hotel room.



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The cable plant was not in great shape. Frequent "signal tuning," performed by the outside contractor, was continually needed to keep performance consistent. Maintenance for the network was extremely disruptive. In addition, Georgia Center IT staff didn't have coaxial cable testing equipment, which made it difficult, time-consuming, and costly to solve network issues.

Meanwhile more and more users wanted to go wireless, bringing with them all kinds of new handheld devices with embedded Wi-Fi. Users wanted connectivity everywhere with a consistent experience wherever they roamed. They also wanted to use the Wi-Fi network for more than merely HTTP access. They wanted to VPN into their corporate networks, stream videos, use VoIP services and access applications and resources beyond the Web.

Due to cost, coverage, reliability and support issues, the IT group at the Georgia Center had installed Wi-Fi throughout the conference center but not throughout the hotel. Additionally, UGA maintained mandatory requirements for role-based user access. There was no consistency between the hotel wired and conference center wireless networking relative to user access. This caused confusion for users and headaches for the Georgia

Center's IT staff who wanted to provide a uniform and consistent experience to users wherever they went.

"We had wanted to go all Wi-Fi for the longest time in the hotel but hadn't found a solution that was reliable and secure enough to become the primary means of network access for the hotel," said Corey Doster, Associate Director for Information Technology at the Georgia Center. "We wanted a unified experience for guests and wanted to do this with wireless. The capital and labor costs to rewire were prohibitive and conventional Wi-Fi technology just wasn't reliable enough to be the only means of connectivity." Then Doster stumbled onto One Media Wireless, a value-added solutions provider focused on the hospitality industry.

COMPANY OVERVIEW

Located 70 miles outside Atlanta, Georgia, the University of Georgia Center for Continuing Education Conference Center and Hotel is a five floor, 300,000 square foot facility with 200-guest rooms.

REQUIREMENTS

- Replace existing hotel coaxial network with stable Wi-Fi infrastructure that can be used as the primary access method
- Reduce dependence on third-party support for the hotel network
- Provide ubiquitous Wi-Fi coverage throughout entire facility
- Enable centralized management of hotel WLAN system
- Minimize the number of Ethernet drops required for access points in the hotel
- Deliver seamless user authentication, user experience, predictable performance everywhere

SOLUTION

- Nine Ruckus ZoneFlex 2942 Smart Wi-Fi 802.11g access points
- ZoneDirector 1025 Smart WLAN controller
- Sixteen Ruckus ZoneFlex 2925 Lite Mesh Gateways

BENEFITS

- Reduced per hotel room monthly support costs
- Simplified administration and management
- Killer Wi-Fi coverage throughout the Georgia Center
- Consistent user authentication experience and process
- More flexibility for hotel guests
- Extended Wi-Fi network in new areas where no Ethernet cabling existed



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But when we looked into some of the unique capabilities ZoneFlex provided, we said this is the Wi-Fi system we've been trying to find."

Corey Doster
Associate Director for
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Georgia Center for
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When One Media introduced the Georgia Center to Ruckus Wireless and the Ruckus ZoneFlex Smart WLAN System, Doster quickly added up the savings. With a Smart Wi-Fi system, he realized that only half the number of APs would be required, and the majority of those APs could be deployed without Ethernet cabling.

Most of the Wi-Fi systems Doster had considered required running from 25 to 30 new Ethernet drops to support the APs needed for ubiquitous coverage. At \$200 or more per Ethernet drop, an additional \$40,000, not to mention the disruption, was an exorbitant price to pay for something that should be able to be performed without wires.

"We had wireless here, that wasn't the challenge," said Doster. "One of the biggest issues was third-party support for the hotel network. The old cable plant was killing us as it got older and older. We wanted to go all wireless and needed something that was simple and easy to manage ourselves, 24/7, and 'industrial strength' enough to use it as the primary access method."

To cover the entire Georgia Center housing facility, One Media Wireless configured and installed nine Ruckus ZoneFlex 2942 802.11g Wi-Fi access points, 16 Ruckus 2925 Lite Mesh Gateways and one Ruckus ZoneDirector 1025 controller for under \$14,000. Two root APs (Ruckus 2942s) wired to the Ethernet network, were deployed on every floor (one floor with three) along with four lite mesh gateways (Ruckus 2925 LMGs) that only required a power source and could be placed virtually anywhere.

"We architected for killer coverage and with Ruckus we got it," said Doster. "We'd seen lots of wireless bridges and extenders but none that were enterprise-class at the right price point and manageable by a central controller."

Doster noted that the Ruckus Smart Wi-Fi solution was less than half the cost of the \$36,000 the Georgia Center paid for the hotel cable data network four years ago and could be used by guests in every nook and cranny of the property.

"Purely from an OPEX/CAPEX perspective, not having

to pull so many Ethernet drops to hard wire APs was compelling in and of itself," said Doster. "But when we looked into some of the unique capabilities ZoneFlex provided with respect to signal stability, extended range, interference avoidance and ease of use, a light went off in our heads - this was the Wi-Fi system we've been trying to find!"

The idea of having a management controller that allowed the Georgia Center IT staff to centrally administer the network onsite or off was highly appealing. So was having Smart Wi-Fi access points that could automatically tune themselves for best signal path as the RF environment changed, thereby eliminating the need for complex RF management and site surveys.

In addition to the pure savings from having to deploy fewer access points and not having to run Ethernet cabling, the Georgia Center was able to reduce the per hotel room monthly support cost from nearly \$3.00 to \$1.50.

To maintain UGA's strict security requirements that call for authenticated user access, the Ruckus Wireless network integrated seamlessly with the existing access controller thereby giving guests a consistent experience when they logged in. Previously, the cable data network provided no user authentication (only MAC-based authentication) tied to the cable modem in each room.

"At the end of the day, the Ruckus Smart Wi-Fi system was less than half the capital cost of any other Wi-Fi system out there, saving us thousands of dollars in annual maintenance costs and tens of thousands of dollars from not having to run Ethernet connections," said Doster.

"We now have a reliable Wi-Fi system that runs itself and provides our guests with strong and fast connections everywhere they are. That's what Wi-Fi is supposed to be all about. And Ruckus delivered."

Tricky corners and challenging materials on each floor of the five-floor Georgia Center presented unique Wi-Fi challenges.

