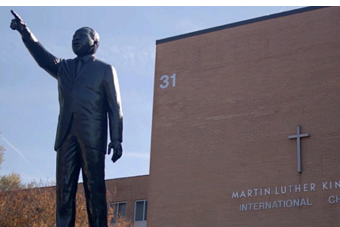# Wi-Fi is an "Invisible Foundation for Learning" at Morehouse College

> "Of the three Wi-Fi networks we tested, Xirrus [had] the fastest and most reliable [Wi-Fi APs]. Now, we have excellent throughput. We have excellent coverage. And we have fantastic cloud management tools."

CLIFFORD RUSSELL,
CHIEF INFORMATION OFFICER,
MOREHOUSE COLLEGE

Overview

FOUNDED IN 1867, Morehouse College is a historically black men's college in Atlanta, Georgia. Its mission is to produce academically superior, morally conscious leaders to address the issues of the day. Graduates include civil rights pioneer Martin Luther King Jr., healthcare rights advocate David Satcher, Atlanta mayor Maynard Jackson, World Series MVP Donn Clendenon and filmmaker Spike Lee.

Wi-Fi is a fixture of Morehouse campus life. "Everyone on campus needs Wi-Fi: students, faculty and staff," says Clifford Russell, the college's chief information officer. But the old Wi-Fi network buckled under the growing load. "Students come to campus with tablets, smartphones, smart televisions and smart DVRs," Russell says. "All of these things want to be on the network, they all want to be on at all times." The IT team's "cloud-first" policy makes reliable, secure Wi-Fi all the more important. The college chooses cloud applications whenever possible, and campus users expect to access these services from mobile devices.

So when an anonymous donor made a generous gift for technology, the college decided to earmark part of it for a state-of-the-art Wi-Fi network. "Today's economy is a knowledge economy," says Russell. "To produce workers who can flourish, we need to give them experience with visionary technology."

Fastest and Most Reliable Wi-Fi

MOREHOUSE EVALUATED LEADING WI-FI SOLUTIONS by deploying them in challenging campus areas, including old buildings with walls four feet thick. "Of the three Wi-Fi networks we tested, Xirrus [had] the fastest and most reliable [Wi-Fi APs,]" Russell says. "Now we have abundant throughput. We have excellent coverage. And we have fantastic cloud management tools." More than 3,000 people use the Xirrus network, including the President, Provost, vice presidents, faculty, staff and students. Students and staff have a single sign-on for multiple campus systems, including Xirrus Wi-Fi, the learning management system, video-over-IP and others.

In the Residence Halls: Studies and Entertainment

THE XIRRUS WI-FI NETWORK made its debut in the residence halls. Students use it for both studies and relaxation, such as watching movies and playing games. "Now, everyone in a study group can connect at the same time," Russell says.

In the Classroom: Foundation for Innovative Instruction

FACULTY MEMBERS TAKE ADVANTAGE of the Xirrus network and students' mobile devices to introduce new ways of learning. One example is the flipped classroom: watching video lectures before class and using class time for activities that hone students' communications and critical thinking skills.
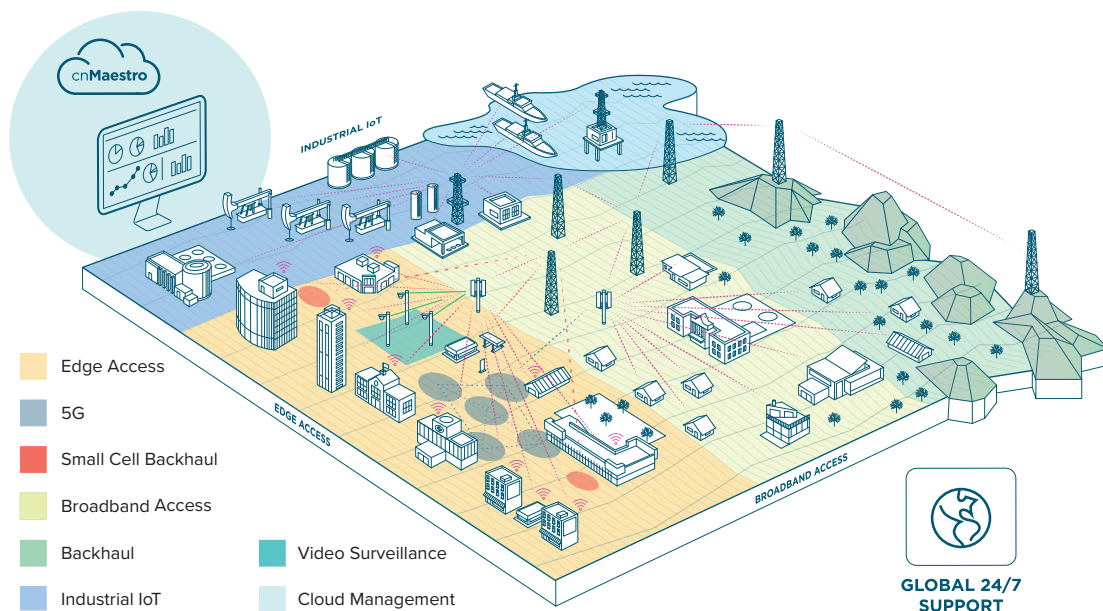
"Saying Wi-Fi contributes to learning is like saying air contributes to living," says Russell. "It's an invisible foundation. With Xirrus [Wi-Fi], the technology fades in the background. Students and professors can focus on the subject matter instead of worrying about the technology because it always works."

For IT: Easy to Manage, Easy to Upgrade

THE IT TEAM MONITORS AND MANAGES all network activity in the cloud, using Xirrus Management System (XMS). "XMS-Cloud makes it easy to see how well the system is performing and how people are using it," Russell says. After discovering that Netflix is one of the top bandwidth consumers on campus, for example, the IT team decided to throttle the bandwidth it can consume. "During class hours, we keep enough bandwidth free for academic applications by ramping down access to Netflix," Russell says. "In the evenings, we ramp it back up so that students have an excellent viewing experience. Xirrus Application Control makes it easy."

The ease of upgrading Xirrus access points (AP) cuts costs. When the 802.11ac Wave 2 standard was ratified, Morehouse simply snapped in a new module, tripling network speed. The upgrade cost far less than replacing the APs.

The IT team can quickly add coverage for special events, some with up to 15,000 attendees. Guests and vendors such as caterers and sound crews need secure Wi-Fi. "We can set up temporary APs in minutes by using Xirrus Rapid Deployment Kits," Russell says. "They save the cost of setting up APs that will only be used once or twice a year."

Cambium Networks' Gigabit wireless solutions enable municipal, enterprise and service provider operators to tailor connectivity to meet exact requirements and grow as needs evolve.

Continuing to Prepare the Next Generation for Leadership

RUSSELL CONCLUDES, "Higher ed is a competitive world. Technology is one of the things Millennials look at when choosing a college. With Xirrus [Wi-Fi], we can offer state-of-the-art Wi-Fi to prepare students to be leaders and enjoy their time at Morehouse."