

A+ User Experience is
no accident:

How school Wi-Fi
makes the grade

A+ UX is no accident: How school Wi-Fi makes the grade

“Learning is no longer limited by bricks and mortar — it is expanded exponentially by bytes and bandwidth.”

Texas Governor Greg Abbott

A few short years ago, Wi-Fi inside K-12 institutions was the exception rather than the rule. Now, more than 85% of schools have Wi-Fi, according to non-profit Education SuperHighway. Between the federal government's E-Rate program and various state matching funds, an estimated 74,000 schools are now connected, making Wi-Fi as much a part of school life as assemblies and lunch lines.

But unlike assemblies and lunch lines, the Wi-Fi user experience is expected to be fast. Administrators, teachers, and students notice immediately when Wi-Fi isn't working because mobile device use is now an integral part of the K-12 experience. Whether it's a student taking a test on a portable device, a teacher texting a colleague, a parent volunteer team using a group text, or a principal sending up-to-the-minute instructions to maintenance staff, people inside a school building need Wi-Fi that works.



Progressive Communications of Macon, Georgia, is well aware of the importance of the Wi-Fi user experience in K-12 institutions. Progressive is a networking solutions provider that counts a number of school districts as clients. Progressive's Terry Pealor said the schools he works with expect students to be able to "bring their own devices, attach to the school's network and access all the resources necessary for their success."

When someone can't connect, the user's complaint is almost always "The Wi-Fi isn't working." Pealor used to hear that complaint a lot from the school districts he supports. Now his team gets fewer complaints, and when they do hear about a problem, they are often able to direct a technician to address the user experience at the device level, confident that the network itself is working well.

Progressive is equipping schools with wireless probes that simulate end user devices. The probe is called a Komodo Eye because it "sees" the network from the user's perspective. The Eye connects to the Wi-Fi network at regular intervals and simulates the user experience. The data it collects is aggregated on a dashboard so that network managers can easily track network performance metrics like speed, latency, and connection quality.

"This allows us to be very proactive as opposed to reactive," said Pealor. "So with these tools we're monitoring it and we know that it's working."

Pealor said most network issues are resolved before they even progress to the point at which a user would notice them. This is especially valuable for schools that rely on Wi-Fi-connected devices for standardized tests. Schools can't afford network problems that present themselves during a test; instead they need to know their network status well before test day.

The Komodo Eye gives network providers a way to inform schools about the real-time status of their networks, and more importantly, it gives them a way to prevent problems from occurring.

"Nine times out of ten we know before the customer knows if it's a Wi-Fi or a network problem and we're already working on it," Pealor said. "We can actually get ahead of these issues and be proactive in solving them rather than reactive on the backside. If you're in reactive-mode, it's already too late, your customers are unhappy. When the network's down or the Wi-Fi's isn't working, people's lives are already affected. With Komodo things run more smoothly, we stay ahead of the problems and address issues before a point of failure."



The visibility provided by the Komodo Eyes has shown Progressive's team that most problems reported as "Wi-Fi is not working" are actually client device problems. Before the Komodo Eyes were installed, the team had to dispatch technicians to troubleshoot problems and the schools had to wait to find out what was wrong. Now, onsite school personnel are often able to solve the client-side problems. When they can't, Progressive technicians are able to work faster at the schools because many potential problems have already been ruled out by the Komodo dashboard. Network problems can often be resolved before they impact the user experience, because of the visibility provided by Komodo.

"We now know, in real time, the operational status and health of the Wi-Fi network through the intelligence provided by the Komodo dashboard, and if there is a problem, we probably know that before the end user does," said Pealor. "It is difficult to manage what you can't see, and the Komodo eyes provide insight into the functionality and performance of Wi-Fi that you simply can't get otherwise."