**7SIGNAL®**

THE WI-FI PERFORMANCE COMPANY

# University of Northern Iowa
## Solves campus-wide Wi-Fi performance issues and restores student confidence



**Founded in 1876, the University of Northern Iowa (UNI) was an institution dedicated to the training of teachers. It remains Iowa's leading teacher education program, and now offers over 90 majors to more than 13,000 students.**

## Challenge

Many institutions of higher learning, both public and private, struggle to keep pace with growing bandwidth and connectivity requirements amid limited technical resources and constrained budgets. The University of Northern Iowa (UNI) was no exception. They had only one network engineer focused on wireless, who could not be everywhere at once. Consequently transient Wi-Fi issues went undiagnosed, leaving the perception in certain high density areas that wireless performance was chronically poor.

## Solution

With the assistance of Aercor, a leading Wi-Fi professional services company headquartered in Eagan, Minnesota, UNI implemented 7signal's Sapphire Wi-Fi Performance Management System to capture the real-time data needed to address Wi-Fi performance and connectivity problems. Sapphire Eye units were installed in the student union, a couple of high-density classrooms and one dorm. UNI also engaged experts from 7signal to help analyze the performance data and optimize the school's wireless network.

## Results

The Sapphire solution relieved the pressure on UNI's sole wireless network engineer to try to troubleshoot problems as they occurred. Instead he was able to use historical and real-time performance data enables UNI to focus on resolving the issues that would deliver maximum benefits. Sapphire also provided the data to support the business cases for tactical wireless upgrades. Thanks to 7signal, UNI has been able to address several severe performance and connectivity issues campus-wide and take steps to ensure that its infrastructure is capable of supporting a growing numbers of users and devices.

### University of Northern Iowa

**Location:** Cedar Falls, Iowa, USA

**Students:** 13,000

**Staff:** 1,800

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**Benefits Realized from the Sapphire Wi-Fi Performance Management System**

- Have the information to identify and prioritize critical issues

- Automated 24/7 data collection enables faster troubleshooting

- Intuitive reports make it easy to justify adds moves and changes

- Dramatically improved Wi-Fi performance and restored a positive perception among students

## Transient Performance Issues

"Wireless is the primary medium for access to our network, the Internet and many of our on-campus resources — we have at least three times as many wireless users as wired users." said UNI Network Engineer Chris Alman. "It's an even higher ratio in the dorms."

As the sole network engineer responsible for wireless, Alman faced the daunting challenge of responding to Wi-Fi problems across the UNI campus. He needed an automated solution that could help identify and troubleshoot wireless issues as they occurred. "The frustrating thing about wireless performance issues is that they're transient." he said. "We might hear from an instructor that there was a wireless problem in class, but by the time I could get there, everyone would be getting ready to leave and the problem would have gone away." Alman continued, "But now, with the performance SLA thresholds I have set, I get an alert immediately performance dips below acceptable levels."

## Invaluable Information

Sapphire provides UNI with a way to monitor and graph trends in usage and proactively know when issues occur. It's detailed performance data helps the university know where to focus its efforts for the greatest performance gains.

"7signal's optimization service was very valuable." said Alman. "We knew there were a lot of things that we could do to improve performance but we were resourced constrained. We've had great success working through the optimization and implementing 7signal's recommendations based on the data we have collected."

The Sapphire system provides detailed reporting and dashboards that present performance data in a logical way. "Sapphire reporting gives me what I need to communicate the status and issues to the IT Director and CIO, in an easy to understand format." says Alman.

## Business Case Justification

The data provided by 7signal also helped Alman justify initiatives to upgrade and improve the wireless infrastructure in various areas of the campus. Alman can show hard data regarding increased usage and performance and connectivity problems.

"We were looking to do a wireless refresh in one of our residence halls, and the department manager couldn't understand why we needed to replace APs that were *only* five years old" Alman recounts. "I needed to present a business case and Sapphire graphs helped show how traffic was growing, and performance was declining over time."

"When there's a problem, people tweet about it. We try to follow up with those users on Twitter and they don't ever get back to us" said Alman. "Being able to have a device out there that's collecting data for us round the clock, is tremendous. It enables us to resolve performance issues fast, with or without the assistance of users." Most importantly, the 7signal solution has helped UNI resolve all its persistent wireless network issues and dramatically improve the perception of Wi-Fi performance across campus.

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> Chris Alman,
> Network Engineer, UNI

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