

CASE STUDY / K-12 SCHOOL DISTRICT / UTAH

A First-in-Nation *Internet* Plan

How Murray and Pine Cove pushed connectivity past the school walls and into students' homes.

First in the nation

private LTE delivered over CBRS spectrum, straight to students' homes

AT A GLANCE

CLIENT

Murray School District

LOCATION

Murray, Utah

INDUSTRY

K-12 Public Schools

SERVICES

CBRS Private LTE · Switching
· SmartZone Controller · LTE
Hardware

PARTNER

RUCKUS Networks

SCALE

6,200 students, 800 staff

HEADLINE RESULT

A first-in-nation home connectivity plan, delivered during a pandemic

01 THE CLIENT

A *century*-old district in a fast valley

Murray School District has been operating for a hundred years in the Salt Lake Valley. Today it serves 6,200 students and 800 staff across seven elementary schools, two middle schools, and a high school.

A district that age carries a hundred years of infrastructure decisions in its buildings, and a district in that valley sits in one of the fastest-moving technology corridors in the Mountain West. Those two facts pull in opposite directions.

Murray's answer has been to lead rather than catch up, which is why its IT director was thinking about the gap between school and home well before the rest of the country was forced to. The district had been treating home access as an equity problem rather than an IT problem.

02 THE CHALLENGE

The network that stopped at the *curb*

IT Director Jason Eyre wanted connectivity for every student, and he was specific about which students that meant. A district can put a device in every hand and still leave a real portion of its enrollment unable to use it after the last bell.

In lower-income homes the barriers were cost and shared bandwidth: either there was no service, or there was one connection carrying an entire household at once. Both look identical from the school's side, and both end with a student who cannot finish the assignment.

Murray had already put devices in students' hands. What it could not do from inside the building was guarantee the device would connect once the student got home, and a one-to-one program that only works on campus is a half-finished promise.

THEN CAME 2020

When COVID-19 closed buildings, the gap between school and home stopped being a long-term equity project and became the entire delivery model. Eyre expedited a plan he had already been considering.

03 FINDING THE RIGHT PARTNER

Nobody's second *reference*

Being first in the nation means there is no district to call for advice and no proven playbook to follow. Murray needed partners willing to build something without a precedent, on a pandemic timeline. Pine Cove and RUCKUS took it on together.

“

Pine Cove is one of my most trusted vendors. They are always quick to respond and they are helping our district be on the leading edge of technology.

JASON EYRE · IT DIRECTOR, MURRAY SCHOOL DISTRICT

04 WHAT CHANGED

A network that reaches past the *walls*

Pine Cove and RUCKUS rebuilt the district's network from the switches outward, then extended it past the property line. The work ran on a pandemic timeline, with hardware of every kind in short supply.

01 The district's switches refreshed

The wired foundation was rebuilt first, because nothing downstream of it can outperform it.

02 A SmartZone controller and LTE hardware

The control layer for a private cellular network, deployed alongside the LTE hardware to run it.

03 Next-generation RUCKUS radios secured

Pine Cove locked down the radios during a period when hardware of any kind was difficult to source.

04 Access points on 10 apartment buildings

Coverage placed where the students actually live, delivering private LTE into homes over CBRS spectrum.

05 A 10 and 40 gigabit backbone

Including some of the first 10-gigabit-to-the-desktop classrooms anywhere in Utah.

05 THE RESULTS

Connectivity that goes *home*

6,200

students, with connectivity that no longer stops at the school door

10

apartment buildings fitted with access points

40G

backbone, plus Utah's first 10-gigabit classrooms

Murray became the first district in the country to deliver private LTE to its students' homes over CBRS spectrum. The practical effect is that a student's ability to finish an assignment no longer depends on what their household can afford or how many people are online at once.

Inside the buildings, the same project left the district with a backbone and classroom capacity that most districts will not specify for years.

06 LOOKING AHEAD

Leading edge, on *purpose*

Murray now has private spectrum, the controller to manage it, and a backbone with room to grow into. The district that had no reference to call is becoming the one other districts call, and the next question is how far past the school walls the network should reach.

Ready to *chat*?

Let's talk about what your organization is trying to accomplish, before we talk about products.

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