Enabling Learning Equity for Homeless Students

In partnership with the Murray City School District, CTL provided Chromebooks provisioned with 48 CBRS private LTE connectivity and device charging solutions to provide learning equity to home-insecure students.

The Murray City School District recently purchased specially provisioned Chromebooks to enable access to web-based learning for disadvantaged students. The program required tight collaboration between the school district and CTL to deliver an equitable digital learning solution.

"It's bigger than connectivity. Students are sleeping with their Chromebooks in homeless shelters to protect them, and we know that for some kids, this is what they can depend on. Ultimately, this is about equity. Enabling fair outcomes for every student and equitable access to an academic experience was the driving force behind our approach."

~ Jason Eyre, IT Director, Murray City School District

The Challenge:
Providing Learning Equity for All Students

Homelessness is on the rise among student populations, and Murray City School District in Utah is no exception. Before and during the pandemic, the district invested in 1:1 Chromebook devices for students. Moving to a digital-enabled learning structure presented some challenges for financially insecure families. They may be unable to afford internet at home, and in some cases, students might stay with friends, or grandparents, in a shelter, or in other temporary housing situations. Additionally, electricity for charging devices might not be available.

Jason Eyre, the IT Director for the Murray City School District, faced the challenge: how could his team ensure all students could connect to the internet and, for those who might be mobile, keep the devices charged to maintain student productivity? And finally, how could the district maintain the confidentiality of a student's home situation?

The Solution:
A Symphony of Elements Create a Harmonious Connectivity Solution

Setting up a private LTE network. Jason and his team decided to set up an LTE cellular network in the district to provide access to students in the district.

However, there were several decisions to make and hurdles to overcome with this solution:

- How do you set up a private cellular network
- How to fund the new network
- What devices were needed to access the network
- How to keep homeless students connected, with or without access to electricity

The team installed a band 48 CBRS network to provide private cellular network internet access to all students anywhere in the district. They used a tower in the city center donated by city officials to complete their network.

Obtaining essential funding. Setting up a network requires a significant outlay of funding up front, so Jason successfully applied and received ESSER I pandemic support to fund the network.

"Another big hurdle is the core tech that runs an LTE network. It is designed to be expensive upfront; it wasn't economically feasible for a single school district, so we approached the state. We found value in rolling this technology out at the state level."

According to Jason, one benefit of using a private cellular network for connectivity is that there is a one-time cost to build the network. "With the sims in, there is no monthly cost. The students can use all the bandwidth they want, with no limits placed on data. They can watch videos to learn and complete online homework assignments regardless of their personal situations," he said.

Searching for an integrated LTE-enabled Chromebook. With the private cellular network selected and funding secured, the next component of the solution to build was the technology access points, the student Chromebooks.

"The biggest hurdle was finding a vendor who would field the technology. We were looking for a single LTE-enabled computing device to ensure we don't have to manage separate devices like MiFi. CTL was the solution we found after looking and working for years on this. Persistence paid off."

Jason and his team selected the CTL Chromebook NL72 Series, with Band 48 LTE connectivity. CTL configured the devices with Google's Zero Touch Enrollment to ensure all devices were manageable from Google Console on day one. "CTL has made huge strides in making LTE work in our world, and I'm grateful for that."

Creating an electrifying solution. With the Chromebooks ready to go, the final piece of the solution required access to electricity, so the Chromebooks were usable for students in non-permanent housing situations.

CTL and the Murray School District team discovered the ideal solution for the mobile students: charging lockers. Students who qualify for assistance receive two Chromebooks – one for school and one for use outside of school. One device charges in a locker all day, and then at the end of the day, the Chromebooks are exchanged so the student can use a fully charged device outside of the school environment.

Protecting student privacy is paramount, and Jason explained it this way:

> *"We're putting the special charging cabinets in a discrete location at school so they can exchange devices unobserved using badges. They can also swap the fresh Chromebook in and out of the same case for privacy. We think these charging cabinets solve an essential problem and are one barrier to why it's not happening everywhere. We hope to show our new solution as a model use case to expand this service to others."*

The Result:
Digital Learning Equity
Regardless of Housing Situation

Today, the network is up and running, the Chromebook charging lockers are installed, the equipment is distributed, and most importantly, the students are learning equitably. Jason suggests this solution can serve as an example to other states. "We think because the Chromebooks operate on a private LTE network in such a cutting-edge way, we're in pioneer territory. We're confident that this use case of homeless students is significant not only here in Utah but across the country. Our solution goes above and beyond to help solve the access to the electricity problem and connectivity challenges."

Increasingly, CTL participates in these extensive collaboration efforts, offering technical advice and industry knowledge to help get the job done.

Jason said, "CTL really understands the education industry and our unique challenges. They dug in deep to help us implement a technology solution, provide program advice and additional resources, and facilitate connections to solve the problem."

At the state level, Rick Gaisford is the Educational Technology Specialist running Utah's Digital Teaching and Learning Program. In a statement, he summed up this winning program:

> *"I am deeply grateful for this incredible partnership and collaborative effort. Our foremost commitment is to ensure that every student can excel in their studies. Having access to internet-based learning tools is a crucial component of this mission. This network empowers us to bridge the digital divide that has unfortunately disadvantaged some of our students for far too long."*

"We were so pleased to support this innovative and creative program. Despite the challenges at each step, Jason Eyre and the Murray City School District persevered and today are truly delivering learning equity to all students," said Erik Stromquist, CEO of CTL.

About CTL's
LTE-Enabled Chromebooks

With the LTE-enabled CTL Chromebook NL72-L Series, stay productive and connected from anywhere.
Enjoy all-day battery life, sharp visuals, an ultra-thin design, and up to 12 hours of continuous use battery life. Combine with a data plan (sold separately) to access data securely. Get the perfect companion for remote work and learning today — the CTL Chromebook NL72-L Series.

- Integrated LTE capabilities (requires a separate data plan from your carrier) to empower remote work without needing Wi-Fi or a hot spot.

- The IP41-rated design to endure drops and resist spills.

- Intel processor, 4 GB of memory, and 64 GB of storage.

- 180-degree lay-flat hinge ensures less breaking when opened or closed.

- Wi-Fi 6 delivers lightning-fast internet connectivity

- Unique 360-degree rotating camera enables for creative video recording and collaboration.

- A built-in carry handle minimizes the chances of drops.

- Two USB-C power delivery ports on both sides offer redundant charging options.

- Power on with up to 12.35 hours of battery run time.

- June 2031 Automatic Update (AU) - giving you years of Google support.

- Customized, service-focused experience that eliminates the time and cost of a third-party servicer.

- OEM-quality services including best practice guidance, program implementation, ongoing maintenance, and whole life cycle management.

Empower Success with ChromeOS

Power up your classrooms and deliver digital equity with proven Chromebook and ChromeOS solutions manufactured by CTL. As your education technology partner, CTL sits side-by-side with you to deliver customized programs that offer unprecedented computing power for students, teachers, and staff, all delivered with the flexible purchasing options and whole life cycle sustainability services you require.

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