Cambium Networks™

Simplifying the BDC Reporting Process with the Precision of cnHeat

"All of this is bleeding edge. cnHeat, the BDC integration and the ease of the heat map generation process—it's so on the forefront of amazing upcoming technologies. We're appreciative that this popped up at exactly the right time we needed it."

MATHEW FORD,
CEO,
AYERA TECHNOLOGIES, INC.

ayera TECHNOLOGIES, INC.

BEST PRACTICES

"Investing in the right tools for supporting the organization, the network and our customers is a key to success. By adding cnHeat to our suite of tools, we have empowered our team to accomplish higher-quality installations that take less time to complete."

Tina Davis,
Director of Operations,
Ayera Technologies, Inc.

Overview

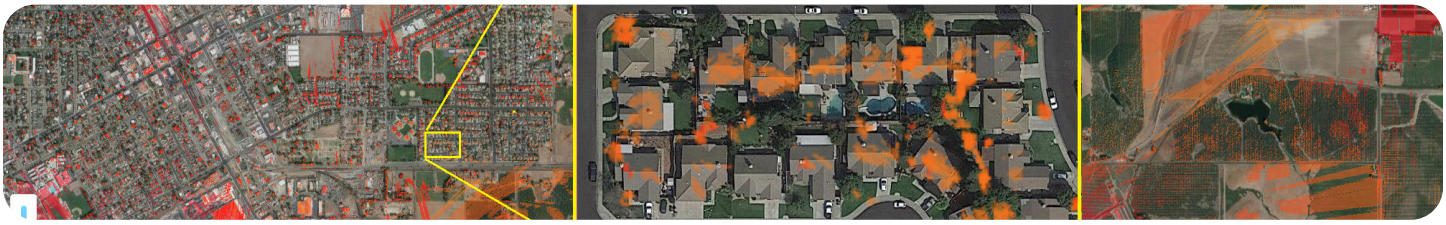
FOR WIRELESS INTERNET SERVICE PROVIDERS (WISP), adding 3 GHz Citizens Broadband Radio Service (CBRS) equipment to their network makes them eligible for Broadband, Equity, Access and Deployment (BEAD) funding. This process also ensures that WISP networks will not be at risk of government-funded overbuilds.

Ayera Technologies, Inc., a rapidly growing WISP based in Central California, has nearly tripled their subscriber count over the past four years. When it was time to submit data to the FCC to prove that connectivity was available in their area, Ayera sought a solution that would simplify the process of submitting their Broadband Data Collection (BDC) reporting.

The Challenge

AYERA HAS APPROXIMATELY 8,500 SUBSCRIBERS in Central California—a mix of residential and business, both rural and urban, serviced using a mix of licensed and unlicensed frequencies. The service provider already uses Cambium Networks equipment in their network, primarily for CBRS, utilizing their Priority Access Licenses (PALs) licenses won at auction in 2020.

Like other WISPs, Ayera only had until September 1 to submit using the FCC's new, more extensive BDC data formats. However, the list of locations that had to be verified in their sizable operating footprint was nearly 1 million addresses, a daunting and insurmountable task in such a short time period.



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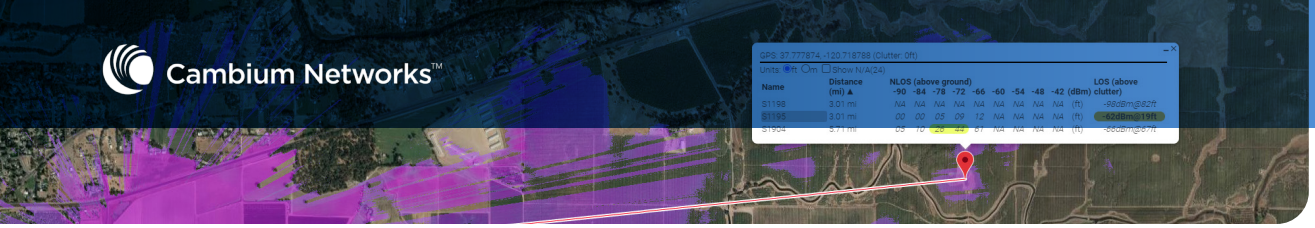
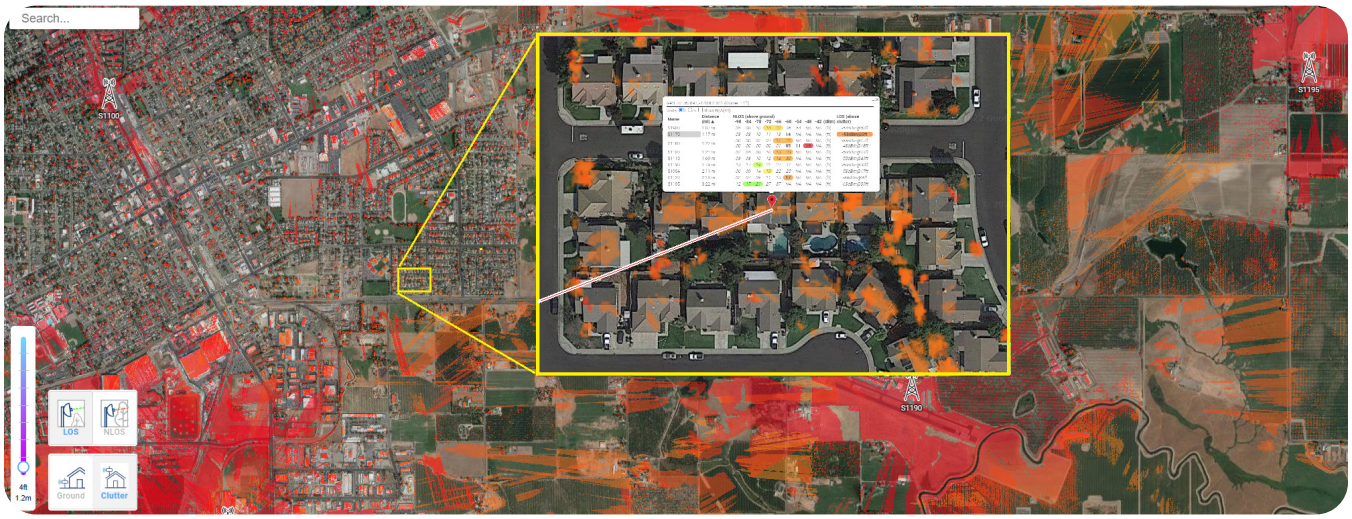


The Solution

AFTER DISCOVERING CAMBIUM NETWORKS' cnHeat, Ayera was able to load their sites and antenna details quickly and accurately, and cnHeat generated an extremely precise geographic shape file that could be used in lieu of validating individual addresses. Since cnHeat uses detailed LiDAR data, accurate to 1-meter resolution, the generated shape provided a highly accurate representation of their service footprint that is both defendable and demonstrable to the FCC if the need arises.

> "The granular detail of cnHeat is truly remarkable. We now have a way to distinguish serviceability on a house-by-house level on the same street without sending a technician for a survey. This is a game-changer and will allow us to pass cost savings onto the customer."
>
> *Mathew Ford, CEO, Ayera Technologies, Inc.*

The added benefit of being able to use cnHeat for rooftop-level analysis by their customer service reps also means that Ayera's daily customer signups can be quickly and accurately pre-qualified, minimizing costly truck rolls to unserviceable addresses. Ayera's technicians also benefit by being able to quickly target the specific portions of the building or property that will give the best signal, resulting in much more rapid, higher-quality installs.



A third, and equally important benefit of cnHeat, is being able to use it in a planning capacity. Since Ayera is undergoing an aggressive expansion, both in density as well as geographic footprint, cnHeat provides critical insight into identifying new potential repeater sites, giving them rapid answers to "what-if" scenarios that will streamline the expansion of their network.

BEST PRACTICES

"Having a high-quality signal is a huge differentiator between us and our local competition. With cnHeat, we can incorporate a heat map for our field technicians to view for every install. The heat map takes most of the guessing game out of the installation process and assists the technician with identifying the best mounting locations for optimal signal."

Tina Davis,
Director of Operations,
Ayera Technologies, Inc.

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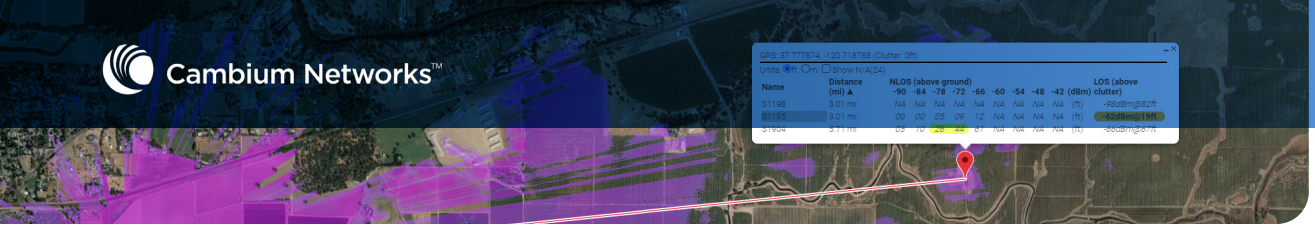


The Results

FOR THE BDC DATA, AYERA WAS ABLE TO quickly load their data into cnHeat and get the accurate output they needed, despite never having used the tool before. Within two weeks, and with outstanding support from the cnHeat team, they were able to submit their report on time and with confidence in the accuracy of the data.

In parallel to the BDC reporting, Ayera also rolled cnHeat into its customer provisioning and installation processes, resulting in a monumental increase in efficiency and accuracy in identifying customers who could and could not be served.

Ayera has always had a very positive reputation in their service territory, owed to using best practices such as using reliable, carrier-grade equipment, building out highly redundant fiber and RF backhaul paths between their repeater nodes, and not placing potential customers on their network that have problematic signal levels. By integrating cnHeat into their back-end systems and processes, they are continuing their commitments to maintain that excellent reputation.

Ayera Installation Cut Sheet

Installer: **John Martin**
Install Date: **Thursday, September 1, 2022**
Arrival Time: **9:00 AM to 11:00 AM**

Customer Information:
Customer Number:
Customer Name:
Address: **Foote Rd, Ceres, CA**
Contact Name:
Contact Number:
TOS Agreed: **No**

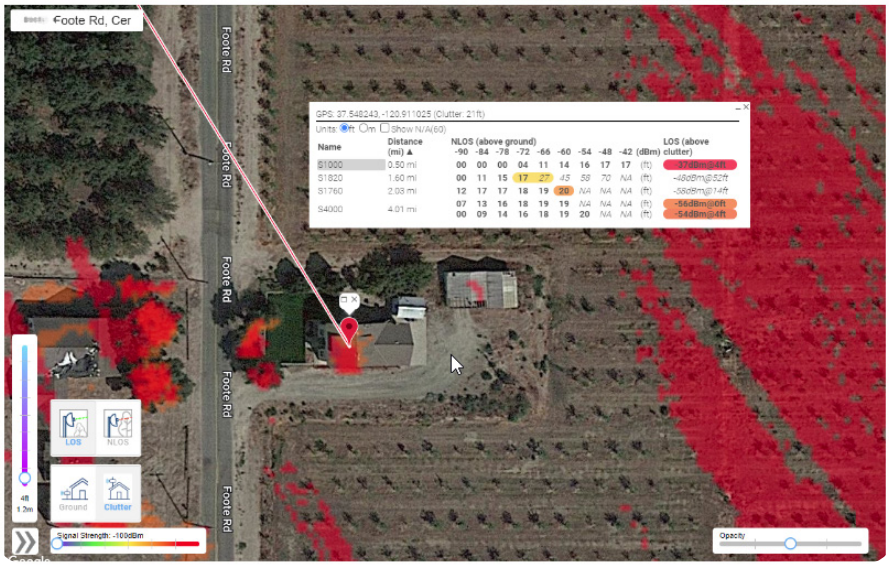
Special Notes:
MUST COLLECT $99

Install Information:
Service Class: ***N/A***
Plan: **R 30-Mbps** Bucket Truck: **No**
Router: Prior ISP:
IP Address: **216.84.** (Node **S1000**)
IP Netmask: **255.255.255.224**
IP Gateway **216.84.**

Nearby Nodes:

Node	Description	Dist	MaxAllow	AC-400 db	AC-19 dB
S1000	ALG Keyes Plant	0.7 mi	5.70 mi	-34	-40
S1820	Pacific Elements Mill	1.8 mi	4.50 mi	-53	-59
S1760	Alpine Pacific	1.9 mi	3.25 mi	-54	-60
S1010	Denis RV	2.4 mi	2.25 mi	-58	-64
S3160	Turlock Blue Diamond	2.9 mi	2.50 mi	-62	-68
S4000	NuWest	4 mi	5.00 mi	-68	-74
S1050	Turlock Main Street	4.1 mi	4.00 mi	-69	-75
S1720	Braden Hughson	4.3 mi	3.00 mi	-70	-76

Additional 2 nodes possible: S2810, S3230



BEST PRACTICES

"cnHeat really helped us get a jump on BDC data by having pre-filled data files generated for us. More than that, it will be extremely helpful in assisting us with our aggressive network expansion timelines."

Tina Davis,
Director of Operations,
Ayera Technologies, Inc.

ABOUT CAMBIUM NETWORKS

Cambium Networks delivers wireless communications that work for businesses, communities and cities worldwide. Millions of our radios are deployed to connect people, places and things with a unified wireless fabric that spans multiple standards and frequencies of fixed wireless and Wi-Fi, all managed centrally via the cloud. Our multi-gigabit wireless fabric offers a compelling value proposition over traditional fiber and alternative wireless solutions. We work with our Cambium certified ConnectedPartners to deliver purpose-built networks for service provider, enterprise, industrial, and government connectivity solutions in urban, suburban, and rural environments, with wireless that just works.

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3800 Golf Road Suite 360, Rolling Meadows, Illinois 60008 USA