

## Avoid Government-Funded Overbuilds Using cnHeat with Integrated BDC to Submit High-Quality Data

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KURT FANKHAUSER,  
PRESIDENT,  
WAVELINC COMMUNICATIONS



### cnHeat Capabilities

- 1-meter precision
- Vendor agnostic
- BDC reporting
- Network design

### Overview

**SERVICE PROVIDERS' NETWORKS ARE AT RISK OF BEING OVERBUILT.** Wireless internet service providers (WISP) can effortlessly submit Broadband Data Collection (BDC) data by using cnHeat with integrated BDC. Adding 3 GHz Citizens Broadband Radio Service (CBRS) equipment—which is eligible for Broadband, Equity, Access and Deployment (BEAD) funding—to network architecture will prevent WISP networks from being overbuilt.

### The Challenge

**THE FCC AND NTIA HAVE RECENTLY DECLARED** that fixed wireless service relying entirely on unlicensed spectrum is not reliable. Areas where reliable services are not available are considered “unserved” and are eligible for BEAD funding for overbuilds which threaten the WISP customer base.

According to the FCC and NTIA rules, locations using the 3 GHz CBRS frequency band – with both PAL license holders and General Authorized Access - are considered reliable. Deploying CBRS will protect from government funded overbuilds and CBRS equipment is eligible for BEAD funding.

Service providers need to file their coverage with the FCC to be included in the Broadband Data Maps and prove that connectivity is provided in these areas.

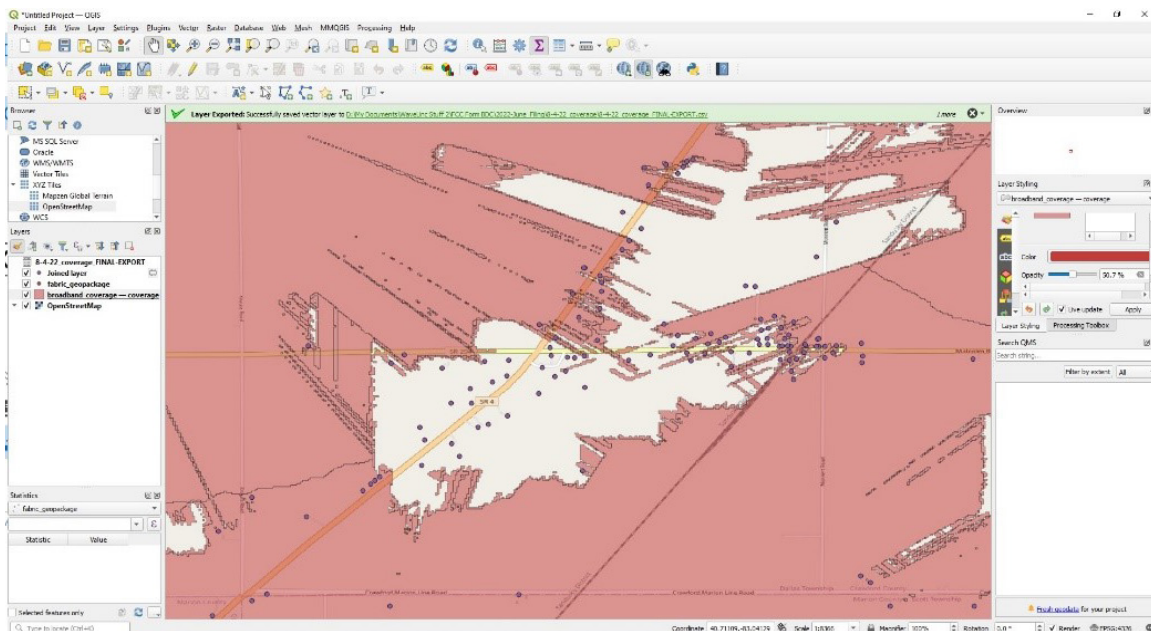
### The Customer

**WAVELINC IS A WISP SERVING** 1,200 business and residential subscribers over a large area in northwest Ohio. With 80 tower locations and 150 access points their network covers all of Crawford County and a quarter of the surrounding counties.

Filing coverage maps and reporting is familiar to Wavelinc. “We have always filed our FCC form 477,” said Kurt Fankhauser, president, Wavelinc Communications. “In the past we have used a mapping solution from a different supplier.”

## The Solution

**CAMBIUM NETWORKS' cnHeat™ PLANNING SOFTWARE** makes it easy for all fixed wireless broadband service providers to meet their FCC-mandated BDC reporting requirements. cnHeat and the integrated BDC reporting is manufacturer agnostic and can be exercised with Cambium Networks fixed wireless broadband infrastructure, as well other fixed wireless solutions. The platform is particularly beneficial for service providers seeking to deliver reliable fixed wireless connectivity using the CBRS frequency band in the context of the NTIA BEAD program.



cnHeat provides 1-meter precise coverage predictions based on LIDAR data that meets BDC requirements. Built upon Cambium Networks' expertise in fixed wireless RF planning, propagation, and modeling and integrated with GIS data, cnHeat enables network operators to generate highly accurate RF predictions and offer reliable service with fixed wireless broadband technology.

In addition to 3 GHz CBRS frequency bands, cnHeat can be applied to networks utilizing 2 GHz, 5 GHz, 6 GHz, 28 GHz and 60 GHz including Cambium Networks or another vendor's equipment.

## The Results

**"I DON'T THINK THERE'S ANY OTHER PRODUCT** on the market comparable to cnHeat with precise LIDAR data and BDC," says Fankhauser. "In the past with form 477 reporting, precision didn't really matter because it was just based on census block data. BDC is so much more precise down to the individual address served. We had to get something way more accurate. There's nothing else I have found that's able to do what cnHeat is doing."



cnHeat makes it easy to export BDC data mapping. “There’s minimal work to be done,” says Fankhauser. “I had no QGIS experience and with cnHeat I was able to export the data, overlay it with the fabric for my area and accurately report which locations have access. I was even able to break it down to show which addresses had access to three different speed levels: 25 Mbps, 50 Mbps and 100 Mbps.”



Fankhauser continues: “Our 1,200 subscribers cover one county completely and a quarter of the surrounding counties. There was no way I would have been able to go through and look at all these addresses – it would be physically impossible. cnHeat makes it easy with a very minimal amount of work.”

In addition to BDC reporting, cnHeat also helps model possible new customer service locations. With precise information, Wavelinc knows the exact location where the installation will perform before scheduling a technician to the site.

Also, the system specifically identifies addresses where connectivity is possible, enabling Wavelinc to do targeted marketing to offer service. “Yes, we had coverage maps with the other vendor but you didn’t want to do marketing with that because it wasn’t precise enough,” says Fankhauser.

“The precise information provided by cnHeat enables a great opportunity for broadband service providers in the United States to extend their network coverage using PMP 450 technology in the CBRS spectrum while making it easy to meet BEAD program reporting requirements.”

*Scott Imhoff, Senior Vice President of Product Management and Planning, Cambium Networks*

When asked what advice he would give to other WISP operators, Fankhauser says, “You definitely have to file the BDC data. If you don’t, you’re almost guaranteed you’re going to be overbuilt. Your only defense is to report that you have coverage at these addresses. BDC reporting looked overwhelming at first but it’s great to have cnHeat to help you. It just made it so easy.”

## **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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