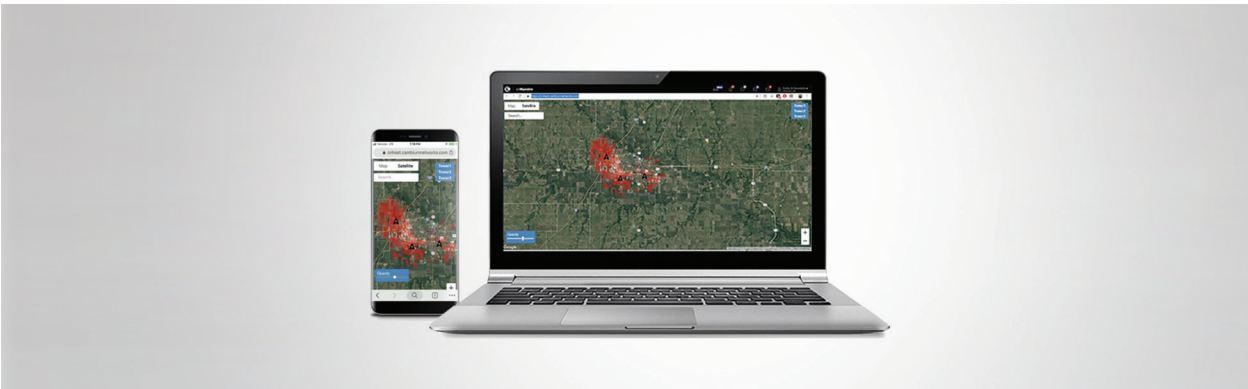
Cambium Networks™

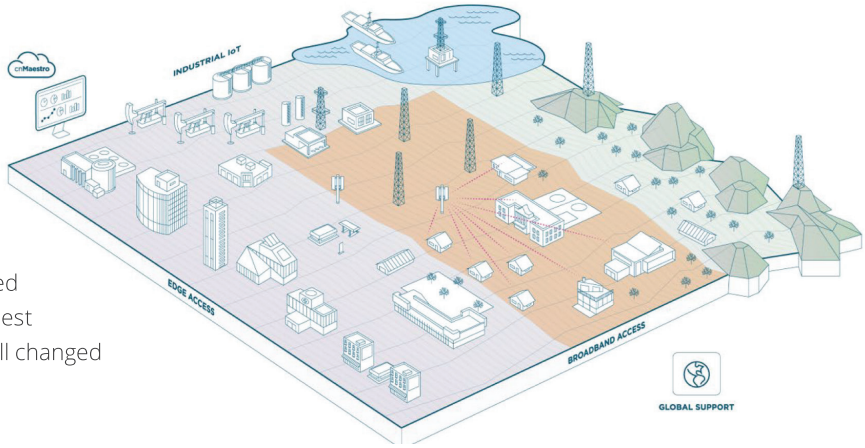
cnHEAT

Heat Map Pre-qualification Saves Time and Money



Wireless distribution networks play a key role in connecting the unconnected. Cost effective last mile point-to-multipoint access networks with MU-MIMO technology connect high-capacity backhaul infrastructure to buildings to support Wi-Fi access networks. Throughput capacity and coverage are essential to customer satisfaction, and wireless network operators. When designing wireless connectivity, each location must have a professional site survey to determine the feasibility of a connection and identify the exact location of the antenna location that will provide the best connectivity.

The pre-qualification process is labor intensive and wireless network operators have attempted many different means to have precise information that identifies the exact best location for wireless connectivity.



However, no single mechanism to date solved the problem of consistently predicting the best location for wireless connectivity. This has all changed with the introduction of cnHeat.

INTRODUCING cnHEAT FROM CAMIBUM NETWORKS

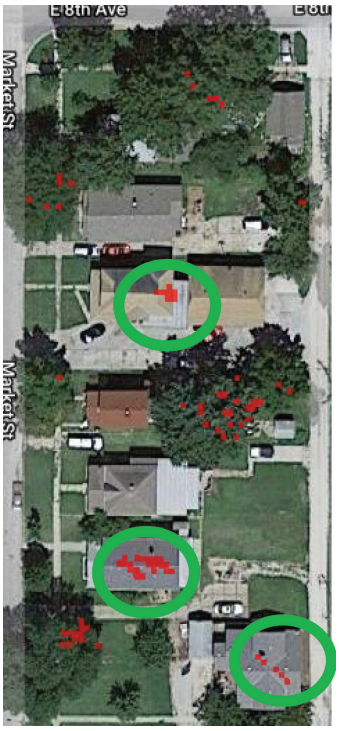
cnHeat planning software provides a heat map display of specific locations that are available for fixed wireless broadband connectivity with the Cambium Networks PMP 450 and ePMP outdoor fixed wireless point-to-multipoint distribution networks. cnHeat clearly identifies new connectivity opportunities to leverage the Cambium Networks' Wireless Fabric portfolio of connectivity solutions.

IMPROVE EFFICIENCY

cnHeat predicts where service for a building can be obtained. In the example on the right, cnHeat informs the installation team that service can be realized at the three homes at the locations specified. This allows the installation team to:

- efficiently plan the specific equipment for the installations
- minimize installation time on-site by initiating the installation in the areas circled in green

Time is saved with the installation resulting in significant amounts of money being saved.

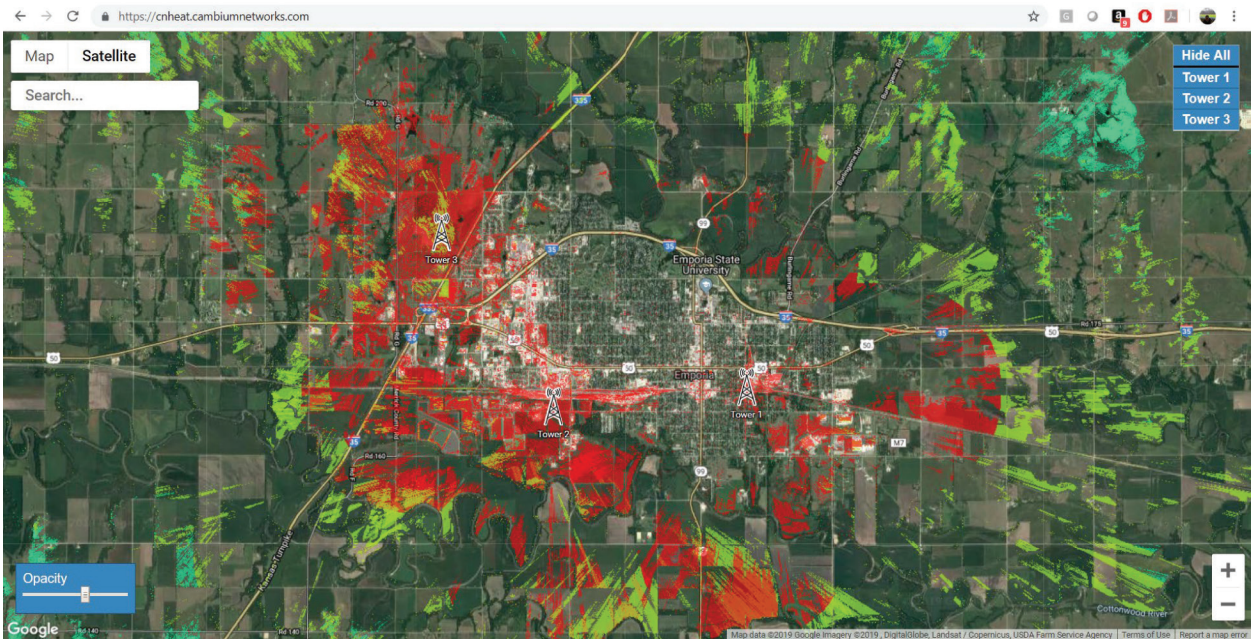


REDUCE WASTE

cnHeat also predicts where service cannot be obtained. Looking at the predictions on the right, cnHeat informs the installation team that no service can be realized at the remaining two homes. This allows the installation team to:

- Avoid dispatching a technician to these two homes

Time is saved avoiding a failed installation resulting in significant amounts of money being saved.



cnHeat heat map

CALCULATING THE VALUE

cnHeat saves time and money on a recurring basis over the course of the cnHeat subscription. How much cnHeat saves you can be roughly determined by answering a few of the following questions for a site or set of sites.

- The number of installations per month
- The percentage of successful installations
- The time saved on a successful installation by knowing exactly where to install in advance
- The time saved by avoiding a failed dispatch

Based on these questions, let's look at different examples for a generalized WISP (wireless internet service provider) over the course of a three year subscription.

	EXAMPLE A: HIGH ACTIVITY SITE WITH LOTS OF TREES	EXAMPLE B: MODERATE ACTIVITY SITE WITH SOME TREES	EXAMPLE C: LIGHT ACTIVITY SITE WITH FEW TREES
Installs Per Month	10	5	3
Successful Installs	6	4	3
Unsuccessful Installs	4	1	0
Time Reduction on Successful Install	30 minutes	30 minutes	30 minutes
Time Reduction Avoiding Failed Dispatch	2 hours	2 hours	2 hours
Cost Per Hour for Installation	$50	$50	$50
TIME AND MONEY SAVED			
Time Saved Per Month	(6 * 30 minutes) + (4 * 2 hours) = **11 hours**	(4 * 30 minutes) + (1 * 2 hours) = **4 hours**	(3 * 30 minutes) + (0 * 2 hours) = **1.5 hours**
Money Saved Per Month	11 * $50 = **$550**	4 * $50 = **$200**	1.5 * $50 = **$75**
Money Saved Over One Year	**$19,800**	**$7,200**	**$2,700**

CONCLUSION

cnHeat saves considerable time and money at a majority of sites; even at sites where there are only a few installs and the surrounding environment lacks trees and is arid. Network operators can try out cnHeat by going to https://www.cambiumnetworks.com/products/software/cnheat/, submitting a most challenging site, and then experiencing time and money savings.

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Cambium Networks, Ltd.
3800 Golf Road, Suite 360,
Rolling Meadows, IL 60008