



**First Communications, LLC** (“First Communications”) is a leading Competitive Local Exchange Carrier in the USA, providing technology solutions to over 35,000 businesses throughout the Midwest.

*“The business case offered by VectaStar has enabled us to reduce our reliance on leased fiber, giving us greater control over our network and the agility to respond more quickly to market demand.*”

*“Crucially, we can now provide more customers with affordable access to higher bandwidth services, which can be up and running in a matter of days.*”

*“Until VectaStar, there simply hasn’t been a viable wireless solution to realize this strategy.*”

*“With the network growing quickly, we look forward to bringing the benefits to more customers across Ohio in the coming months.”*

**Margi Shaw,**  
President,  
First Communications

## VectaStar® replaces leased fiber in Ohio to increase carrier’s agility to scale network

First Communications deploy VectaStar to reduce dependence on leased fiber and quickly scale their fixed wireless services



### The challenge

Despite there being over 200 broadband providers in Ohio, over 90 per cent of the population remain without access to speeds of 100Mbps or faster<sup>1</sup>. With fast broadband now a fundamental business requirement, this represents an untapped market for carriers.

First Communications recognised at an early stage how the bandwidth requirements in Ohio were developing and focused on bringing more advanced services to market. As a leading Competitive Local Exchange Carrier, they had previously roamed on leased fiber to offer T1 and Ethernet broadband. Although delivering the necessary capacity, the business case of leased fiber hindered First Communications ability to realise their vision.

The cost of fiber, alongside a lack of control over its management and coverage, meant First Communications were restricted in bringing to market the high capacity services that were in demand. They needed a new solution.

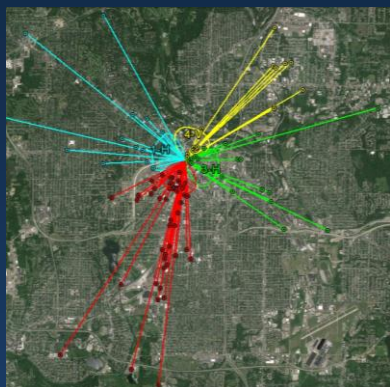
### The solution

Following a business case analysis of customer locations and their desired services, First Communications decided to switch from leased fiber to deploying their own fixed wireless network. The decision came about through the launch of CBNL’s 28GHz VectaStar licensed point-to-multipoint (PMP) platform.

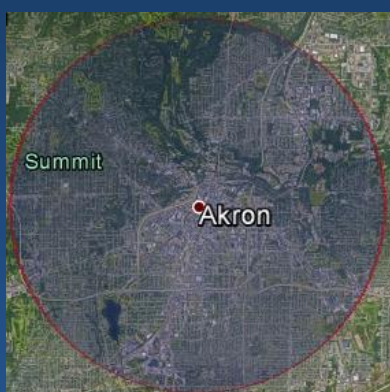
The business case of VectaStar meant it was faster to deploy and more cost effective compared to alternative technologies. It enabled First Communications to inherit the cost savings of a PMP architecture, but avoid the pitfalls of unlicensed spectrum. This allowed First Communications to build out high-capacity coverage at a fraction of the cost compared to similar carrier-grade fiber or licensed point-to-point (PTP) links.

This was recently backed up by Real Wireless, who reported licensed PMP can enable a carrier to generate 1.8x higher ROI than PTP.

<sup>1</sup> BROADBANDNOW, 2016,  
[www.broadbandnow.com/Ohio](http://www.broadbandnow.com/Ohio)



**Figure 1:** CBNL's link design for First Communications in Akron



**Figure 2:** New customers could be connected in a matter of days within the 3 mile hub radius

**CBNL is the global market leader in licensed point-to-multipoint.**

CBNL's carrier-class VectaStar® platform serves over 100 communication providers in over 45 countries, including seven of the world's top ten largest mobile operators.

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Based on customer data, CBNL provided a network design that enabled a cost effective deployment (Figure 1), utilizing First Communications' existing 28GHz licenses.

First Communications then began a process of deploying VectaStar hubs to offer affordable bandwidth upgrades for existing customers, while gradually reducing their dependence on fiber. This not only increased revenues, but brought significant OPEX reductions.



Initial hub deployments were focused in Cleveland, Akron and Canton, providing existing customers with packages up to 200Mbps. By focusing subsequent sales activity within the three mile hub range (Figure 2), First Communications were able to connect new customers in a matter of days, compared to the many weeks or months it typically takes to arrange a leased fiber or PTP link.

As hubs began to populate with new customers, First Communications drove further optimisation through the innovative reuse of spectrum, achieved by statistical multiplexing and VectaStar's proprietary time division multiple access (TDMA) software.

## The results

Within a short space of time, First Communications' move to licensed PMP had revolutionised their business model and brought significant benefits to their customers.

Crucially, this enabled First Communications to complete the first phase of their network expansion and roll out the full range of voice, broadband and cloud solutions to their customers. This achievement would not have been possible under the financial burden or deployment restrictions of fiber.

The efficiency and agility of licensed PMP not only enabled First Communications to invest in higher bandwidth services, but become more responsive to new market opportunities. Deploying further hubs and connecting new customers was completed in a matter of days, providing a competitive advantage for First Communications and strengthening their market position.

Following the completion of phase one, First Communications is now planning further VectaStar deployments. With complete control over their network and the ability of VectaStar to offer up to 13.2Gbps per hub site, First Communications now have a scalable and cost effective path to expand across the Midwest.

With high frequency spectrum becoming more available and carriers actively trialing its use for future 5G fixed wireless, First Communications has positioned itself as a forerunner in the industry.