



JET Case Study

Service Providers

Fixed wireless is the way to go for Alaska Communications

JET PtMP deployed in one of the toughest environments in the world to deliver never-before seen broadband speeds to rural communities in Alaska

About Alaska Communications

Alaska Communications is a leading service provider headquartered in Anchorage, Alaska that has been serving both residential and business customers since 1998.

Alaska Communications operates an advanced statewide network, serving communities from Deadhorse and down through the Kenai peninsula using a mix of technologies in its network including fiber, microwave, satellite, 3G CDMA technology as well as an undersea fiber optic system connecting Alaska to the contiguous U.S.

Reaching the unconnected

Committed to serving Alaska's rural communities and seeking to play a key role in bridging the digital divide led Alaska Communications to win the FCC's Connect America Fund program budget in 2016. Through the program, Alaska Communications is set to receive approximately \$19.7 million per year for 10 years to drive broadband to approximately 31,500 locations throughout Alaska.

As per Connect America Fund, Alaska Communications committed to bring internet service with speeds of at least 10 Mbps download and 1 Mbps upload to rural locations in Alaska approved by the FCC. After deploying RADWIN JET, Alaska Wireless was able to deliver speeds much greater than 10Mbps.

To extend its network and reach Alaskans living in remote and rural areas, Alaska Communications concluded that fixed wireless broadband was the best technology alternative.



“We chose fixed wireless because it allowed us to reach a broader network of businesses and consumers faster and cheaper than other technology solutions such as fiber or copper. With fixed wireless we have the chance to offer higher speeds at a lower latency.”

Beth Barnes, Senior Director of Mass Markets, Alaska Communications



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The advantages of deploying fixed wireless solutions in Alaska's tough climate and terrain are numerous:

- » Wireless has far lower costs per home than fiber – it is very cost prohibitive in areas such as Alaska where homes are very spread out to get fiber to every residence and business
- » Wireless is easy and fast to deploy whereas unique environmental challenges that include frost heaves and difficulties with soil make boring through to put fiber in a difficult thing to do

RADWIN's JET fixed wireless is the right solution

Alaska Communications turned to leading system integrator t3 wireless, who recommended fixed wireless broadband from RADWIN. Alaska Communications tested several fixed wireless technologies and ultimately selected RADWIN's JET Point-to-Multipoint solution.

The challenges for RADWIN's fixed wireless

Alaska provides unique deployment challenges for any type of telecommunications deployment and especially fixed wireless, including:

- » Extreme temperatures - -40°F to 80°F, and severe temperature swings and winds
- » Alaska ranks as one of the harshest environments in the U.S. – frost heaves, ice and varying terrain
- » Interference – in some cases the noise floor is as high as -60dBm
- » Near -line-of-sight conditions due to trees and dense vegetation
- » Land mass and scattered population – chosen solution had to enable sound return on investment
- » Meet bandwidth requirements per household - from 10/1 to 25/3Mbps
- » Travel time to a market can take many hours/days – chosen solution had to be reliable to eliminate service outages and recurring site visits





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Deploying JET PtMP

In late 2017, Alaska Communications started initial rollout of JET PtMP in Deadhorse, Alaska - one of the harshest environments in the United States - with temperatures below negative 40.

Alaska Communications is using JET PtMP in 5.1 to 5.8GHz and 3.65 to 3.7GHz to offer a service under the registered brand name "Unlimited FiWi" (fixed wireless) which is unlimited data with no caps and no throttles to deliver very high speeds to customers.

As of Q1, 2020, Alaska Communications' JET-powered network spans 200 sq miles and serves 6 communities, from Deadhorse in the North Arctic and down to the Kenai peninsula in the south.

To date, Alaska Communications has installed:

- » Approx. 30 towers, some as high as 150 feet,
- » Approx. 200 base stations – there are 3-4 JET base stations per each tower (and in some cases more).
- » Alaska Communications' plan is to grow to hundreds of towers over the next 5 years and serve tens of thousands of subscribers in rural areas not served by conventional facilities.

RADWIN's Professional Services has been crucial to the success of the project.

RADWIN's Professional Services team together with t3 wireless engineering understand the RF environment and challenges and conduct scenario planning – assuring throughput rates etc, using drones to plan out site maps and more

Benefits of JET

With JET, Alaska Communications is realizing the following advantages:

- » The costs of deploying fixed wireless are far lower than rolling out fiber to the home, eliminating costs and delays associated with trenching fiber
- » JET overcomes geographical and environmental challenges to rolling fiber – enabling to reach customers that are scattered and hard-to-reach
- » Faster speeds that can take customers into the future: Enabling the delivery of service packages ranging from 10Mbps to 100Mbps to residential and business customers, between 5 to 30 times the speeds of previous solutions
- » Meet SLAs required by business customers
- » JET with beamforming interference mitigation capabilities enables operation in high noise areas
- » Scalability of RADWIN management software across the different spectrums enables Alaska Wireless to provide not just a few fixed wireless customers but thousands of fixed wireless customers





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What Alaska Communications' customers are saying about JET

“The customer experience has been phenomenal. We've gotten comments about the high speeds, customers love it and are praising the ability to get service at their locations.”

Beth Barnes, Senior Director of Mass Markets, Alaska Communications

“Alaska Communications came down and installed RADWIN's fixed wireless network in 1 day. It was great, super-fast, no trenches had to be dug and it's working just as good as fiber.”

I Whitney, Executive Director, Alaska Wildlife Conservation Center (Alaska Communications' business customer)

“We went from 7Mbps to 35Mbps thanks to RADWIN's JET PtMP, which eliminated any delays in our billing process.”

Tina McLean, Director & Owner of Active Abilities Physical Therapy clinic (Alaska Communications business customer)

“I can speak personally to speed and performance between what people had before and after fixed wireless. Before fixed wireless came to the area we had 3Mbps at our house, barely enough to stream anything, barely enough to do any work from home and the FiWi now is taking us over 50Mbps and with 50Mbps we can stream everything we want – Skype meetings, Netflix, Amazon Prime, streaming music. We can stream over 4 or 5 devices; it just opens whole new worlds for us.”

Stan Masneri, Senior Manager, Alaska Communications



About RADWIN

RADWIN ensures service providers a carrier-class broadband experience, built to support real-time bandwidth-hungry services integral to our everyday lives, while staying one step ahead of the digital game. Deployed in over 170 countries, RADWIN's systems deliver highest capacity in the toughest conditions.

www.radwin.com