

ChainLINK

Project Overview

ChainLINK, a series of microwave towers stretching from Homer to Dillingham to Unalaska, carrying 4 Gbps of capacity, and serving all the communities in its path.

OptimERA has developed a plan to fix part of the overall broadband problem facing Alaska. This plan evolved into ChainLINK, a project that will provide higher speeds, lower latency, and a lower cost to Southwest Alaska.

Using our knowledge and expertise gained during our 15 years providing service in Unalaska, we will construct 100% solar powered sites, thereby lowering installation costs (CapEx) and minimizing maintenance costs (OpEx) over the life of the equipment. The benefits of having enough solar to provide the power at each site is that there are no moving pieces, no fuel to transport, and allows installation with lower cost helicopter. Something that has driven the cost up on most similar projects. Our philosophy is to backup the solar with solar. Where many solar installations have gone wrong is that they don't have enough solar. Our sites can produce enough power to operate all day, during the lowest light cycle, in the heaviest snow and light obstruction. We have done this at a remote site in the aleutians that operated from 2011 - 2016 with the only maintenance being yearly routine site visits.

To increase the life of the radio infrastructure, the towers will be covered with radome shells. This provides resistance to ice buildup, creates a more stable link, and protects equipment from the harsh environment. This architecture of using resilient design purposely build for Alaska by Alaskans will ultimately result in lower costs and more reliable service for the consumer. In addition, as the demand for higher capacity grows, the cost of additional antennas and equipment to meet this demand is reduced as no additional loading is caused on the tower.

The design of the system is to be highly reliable and operational over a 25 year life with minimal maintenance costs. ChainLINK will deliver sufficient capacity to meet current demand while being capable of meeting future requirements as need increases. This project reduces end user cost by 75%, increases capacity by 20x and will provide 100 Mbps connections to the home.

OptimERA has the expertise, knowledge, and support to build and operate the ChainLINK Network.

Emmett J Fitch
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