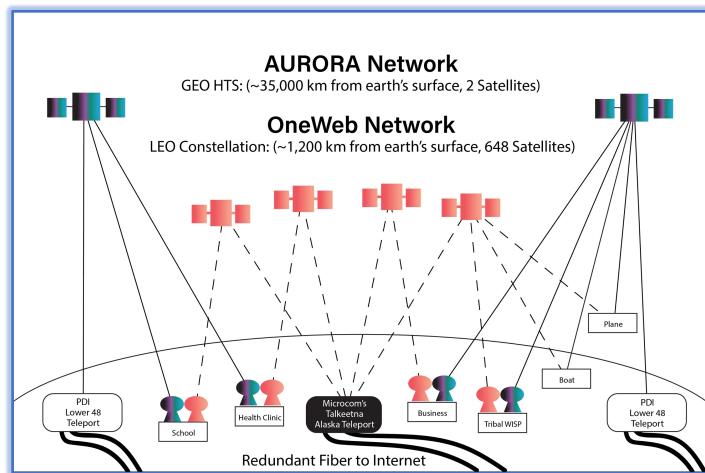


HYBRID SATELLITE MIDDLE MILE GEO HTS & LEO

What is Hybrid Satellite Middle Mile?

Hybrid satellite merges the best aspects of the latest satellite technologies. By combining affordable GEO HTS (geostationary high throughput satellite) with low latency LEO (low earth orbit), a network provider can maximize efficient capacity consumption and utilize low latency capacity, only when needed.

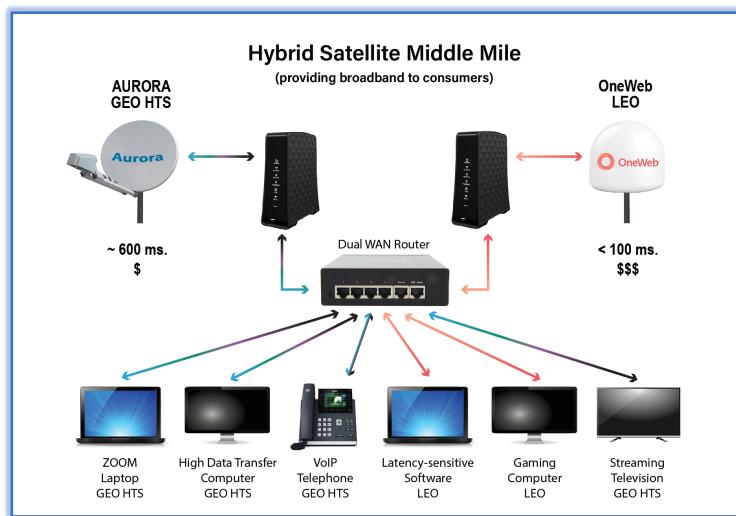


Usually applied to last mile networks, the concept of the "hybrid satellite middle mile" is new. The very purpose of a hybrid network is to provide an affordable and robust connectivity option. Characteristics of this service are redundancy for the middle mile component of the network, low latency middle mile where low latency is important, leveraged low-priced, high latency middle mile service when it is available, and to expand capacity in a low latency network where capacity is limited. A hybrid satellite middle mile network can also be combined with an existing network to increase a telecom's backhaul capacity.

In Alaska, this concept allows us to serve locations that most agree cannot reasonably be served by terrestrial fiber, within the next year. Our hybrid satellite service can do this quickly by taking advantage of both the new Aurora GEO HTS network and new OneWeb LEO satellite constellation.

What does this look like at the consumer level?

Both the Aurora GEO HTS and OneWeb LEO networks are connected to a dual WAN router. The data is then segregated to receive streaming video, file downloads, email, voice services and most web browsing over the high latency network. Gaming and most latency-sensitive software will utilize the low latency network. Although pricing will be disruptive and lower than what's currently available in the Alaska market, it is imperative to keep in mind that LEO's total capacity to any community is limited (both OneWeb and Starlink provide a maximum of 400-500 Mbps) and more expensive (1.5 to 3 times the price of GEO satellite). A Hybrid system is very economical and cost-efficient.



Regulatory Consideration

When the goal is to provide the rural customer with affordable and fast broadband connectivity, and that goal is achieved, the hybrid concept should meet any and all regulatory requirements. Since this is likely to be part of the short-term solution for broadband across Alaska, its regulatory status needs to be resolved quickly and without extensive rulemaking.

For more information, please access our white paper *LEO/GEO Hybrid Broadband* at www.auroraiv.com/news/.