Loea

The ability to distribute and deliver communication services and information is a critical piece of the telecommunication network. Unfortunately, many existing network systems and technologies have proven to be inadequate in delivering "Last Mile" access.

Applications

- Last Mile Access
- Network Redundancy
- Rapid Deployment
- Difficult-to-reach Areas
- Temporary Networks
- Disaster Recovery
- Triple Play (Internet, Television, Phone)
- Voice-over-IP

Benefits

- High bandwidth up to and exceeding 1Gbps
- Rapid installation and deployment
- Improved service offerings

Application Brief

Carrier/Telco Solutions

The Problem

As the demand for communication services and applications – including Internet access, telephone, on-demand video and television programming – to homes and businesses continues to grow, the ability to distribute and deliver this information becomes a critical piece of the telecommunication network.

While fiber-based metro networks and rings have more than adequate capacity required for these applications, the real challenge has been providing a high-bandwidth solution for the "Last Mile".

Unfortunately, many existing network systems – often based on slow, antiquated copper network infrastructure – are proving to be inadequate when it comes to delivering "Last Mile" access.

Fiber-optic cabling was expected to be the solution to the Last Mile problem since it provides the capacity and quality expected from consumers and Enterprises. But, getting fiber to these various locations is difficult, time consuming and costly – making it an unviable option in the majority of cases.

Wireless technology – in the form of licensed microwave, unlicensed RF or Free Space Optics – was also thought to be the optimal Last Mile solution. Wireless was also viewed as a lower-cost failover technology for network redundancy. But, lack of bandwidth, potential interference issues, security concerns and weather impact, have caused carriers and service providers to cautiously proceed with wireless.

As telecommunications providers seek ways to grow revenues, reduce costs yet quickly increase service offerings, the need for an economical, easy-to-deploy, high-speed access solution becomes apparent.

The Loea Solution

Loea's millimeter wave radio products are the ideal solution for carriers and telecommunications companies seeking a solution to the Last Mile access and network redundancy problem.

Instead of being burdened by the cost and time delays of bringing fiber to the home or Enterprise, service providers can now quickly link locations via a high-capacity, high-quality wireless point-to-point solution. The solution is ideal for Last Mile access, for reaching difficult-to-wire environments and for easily deploying of network redundancy (links can be deployed as failover to fiber).

Service providers can rapidly build networks using Loea solutions – gaining subscribers and offering services in a fraction of the time required to trench fiber. And, if needed, since the technology is wireless, networks can be easily redeployed to new locations when fiber trenching is completed.

With data throughput of 1.25Gbps, Loea's solutions are more than capable of handling bandwidth-intensive voice and data requirements in today's emerging networks.

Based on proven millimeter wave technology used by the military, Loea's products are also highly secure and unaffected by most weather occurrences such as fog.

Transmission is at the upper radio frequencies (70/80GHz) – bands recently approved for commercial use. A simple, web-based licensing process reduces the potential for interference and spectrum saturation issues facing lower, unlicensed frequencies. And, a very narrow beamwidth (0.4 degrees) ensures that data transmission cannot be easily intercepted.

Installation can take place in the matter of a few hours – a significant reduction compared to fiber trenching.

Loea App Brief

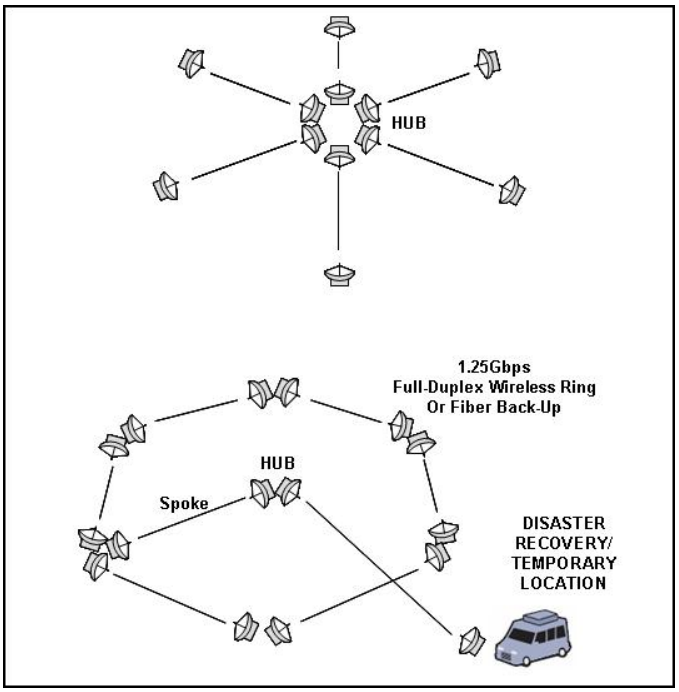
Carrier/
Telco
Solutions

Benefits

Loea's millimeter wave wireless solutions are helping carriers and telecommunications service providers improve service offerings while reducing costs. Benefits include:

- Rapid Installation – can be installed in hours.
- Cost Savings – eliminates high costs and delays associated with fiber trenching.
- Expanded Reach – can be installed where environmental or geographical obstacles which make fiber runs unavailable.
- Improved Network Performance – removes throughput constraints and interference issues facing licensed microwave and unlicensed RF.
- Simplified Licensing – replaces cumbersome microwave licensing with easy web-based process.
- Minimal Weather Impact – works in environments where FSO technology is impacted (fog).
- Enhanced Bandwidth – increases network capacity with Gigabit speeds.

Configuration Example



Loea Products

Loea products have been used as a vital communication link for some of the world's leading Enterprise, Carrier and Government customers.

Based on 70/80GHz millimeter wave technology (also referred to as E-Band), Loea offers the highest-performing, highest-availability wireless solutions available on the market today.

And by leading the successful petitioning of the FCC for commercial use of these frequencies and spectral bandwidth, Loea products will be able to reach up to 10Gbps throughput in the very near future.

Loea solutions are ideal for point-to-point connectivity between buildings, campuses and remote locations – eliminating the need for time-consuming and cumbersome fiber runs.

Unlike other wireless technologies that have performance limitations due to bandwidth, weather and distance, Loea's products provide full-duplex 1.25Gbps throughput with 99.999% availability at link distances exceeding 1km. And Loea's use of upper radio frequencies coupled with its narrow beam width (0.4 degrees) make it one of the most secure forms of wireless transmission today. No other wireless technology can make such a claim.

All Loea millimeter wave solutions include:

- 2 Radios
- 2 Antennas (2-foot diameter for maximum range)
- 2 Radio Mounts and Steering Mechanisms
- Installation and rooftop hardware are not included

About Loea

Loea Corporation is the pioneer of the 70/80 GHz wireless domain and the product, quality and technology leader.

Loea was the first company to release and deploy successful product in the 71-76 and 81-86 GHz bands and has been on the leading edge of technology creation in this space for over 10 years. Loea successfully petitioned the FCC to gain access to this spectrum for commercial use in 2001 and was first to receive commercial FCC approval in July 2005.

Loea is headquartered in Honolulu, Hawaii. R&D and manufacturing locations are located in Kahului, Maui, Hawaii and West Hatfield, Massachusetts.

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