Opportunities for FSO infrastructure

Mobile Other Licensed operators and Other Licensed Operators, (M)OLO, have historically relied upon fixed wire and radio frequency technologies to meet their network infrastructure requirements. In today's networks, it is necessary to optimize the use of Capex and reduce Opex. Free Space Optics solutions address both these concerns.

Current Situation

The quality and reliability of fixed wire service is the benchmark by which expectations are set. However, off-net charges and the continual focus on Opex reduction encourages the use of more flexible reach products such as wireless. Currently, wireless products are synonymous with microwave radio solutions. While these are robust and reliable products, they are susceptible to environmental conditions, namely rainfall intensity. Another fundamental constraint is the capacity limitations of this technology. Other factors affecting deployment of these solutions are the risk of frequency over-subscription, year six spectrum pricing considerations and street works delays. These all lead to an increase in the time to deploy the infrastructure. As the (M)OLO's time-to-market is increased, so is the time to customer revenue.

Opportunities for FSO

The fSONA SONAbeam FSO product sets offer:
1) capacity capability and network deployment flexibility
2) environmental resilience to rain fall
3) license-free deployments that decrease the time to revenue

FSO can be used as a standalone or complimentary technology to the existing transmission solutions currently at the disposal of (M)OLO's.

FSO delivers transmission bandwidths from E1 / T1 to Gigabit Ethernet (1.5Mbps to 1500Mbps) and is protocol transparent. Protocol transparency also gives SONAbeam the flexibility to adapt and maintain its value in your network as technologies change.

SONAbeam eliminates the need for costly spectrum licenses or the need to meet future regulatory hurdles. The tabling of year six spectrum pricing, which will focus on channel size, bandwidth utilization and environmental congestion, (all of which must be considered with the deployment of microwave radio solutions) will be expensive and time consuming.

FSO has none of these challenges. Capacity on routes can be provided cost effectively to provide (M) OLO customers with bandwidth on demand that not only maintain customer satisfaction, but also attracts customers where bandwidth restricted technologies have been deployed by other providers.

Customer Opportunities

Last Mile

FSO can be rapidly deployed to provide last mile connectivity when needed to serve customers with restricted access or street works requirements. Faster time to provisioning provides the (M)OLO with early revenue generation and client service satisfaction. This is especially true where time-bound SLA's have been requested but local government bodies have employed roadblocks that prevent timely delivery.

Resilience and backup for SDH radio

FSO can provide SDH radio networks with resilience and backup paralleling the fixed wire environment. In this circumstance, FSO is used a complementary asset to microwave networks so that the environmental conditions that affect microwave, namely rain fade, are negated.

Modes possible are:
1) FSO for the standby so transmission will continue even through rain fade
2) 1+1 networks where there is diverse path/technology resilient back-up
3) Doubling capacity as the service provided by the radio and FSO infrastructure can now be 2+0

Temporary Solutions

FSO can be used for special event deployments or rapid coverage installs. The SONAbeam is ideal for temporary deployments as it is resilient, installs rapidly and does not require refurbishment or retuning from one install to the next.

FSO/WiFi Networks

As the demand for access to the Internet steadily grows, so does the need for broadband access. So rapid is this growth, in fact, that fiber and copper network infrastructures simply can't keep up, especially in densely populated urban environments. This has resulted in a bandwidth bottleneck at access points. SONAbeam FSO provides the answer by creating the backbone to which the wired and/or wireless connection can be routed back to the Network Access Point. This can either be the Primary transport or an overlay on the current (M)OLO network.

Please contact your sales representative for further information.