

Microwave Backhaul– An Attractive Alternative To Leased T-1 Lines

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With the arrival of 3G, carriers are building more advanced systems capable of offering new services at higher data rates. These systems have created many challenges, one of which is backhaul between cell sites and switching networks.

Two common methods used by operators to support backhaul are the utilization of leased T-1 lines from wireline carriers or development of a microwave network. During initial stages of deployment, carriers are focused on building their base stations and switching networks and most often depend on wireline carriers for leasing of T-1 lines for backhaul. While incurring higher operating costs, this practice allows for fast deployment and quick turn up of service. As their customer base increases however and as they experience growing demands for larger coverage areas and for higher data rates, operators are faced with greater backhaul challenges.

Even though wireless carriers incur large operating expenses on T-1 lines, this is an area over which they do not have much control. Many wireless carriers express frustration at the number of facility outages and the wireline carriers' lack of adequate service in fixing these outages. This translates to lost revenue and contributes to overall customer churn. Often, a wireline carrier is a competitor of the wireless carrier in another market creating an undesirable situation for the carrier.

As wireless systems mature, carriers are looking for backhaul alternatives that can provide more reliable services and over which they have greater control. Microwave backhaul is the alternative, which can offer carriers far greater flexibility, improved system performance, greater control and lower operating costs.

Reliability Is Key There is a perception that microwave backhaul is not as reliable as wireline. Field data has proven otherwise. With the technological advancements that have taken place in digital radios and microwave antennas, systems can easily be designed with 99.9999% availability rates -- less than one minute of outage per year. Wirelines have demonstrated lower reliability rates, especially in rural areas.

Microwave Systems Are Very Flexible Another advantage to installing a microwave system is its flexibility to support changes in system capacity. Using a microwave backhaul system, carriers can increase total capacity by simply increasing the number of circuits or by utilizing hot stand-by systems. The system allows carriers to build backhaul capacity based on their customer growth – pay as you grow.

Cost Is Critical. Microwave backhaul provides cost savings to carriers in the long run. Based on average monthly cost of T-1 lines, carriers are discovering that microwave backhaul infrastructure is providing a payback in 12-24 months. This is a great cost benefit.

Backhaul is an extremely important part of a reliable wireless system. A microwave backhaul system provides wireless carriers with a reliable, flexible and cost effective alternative to leased T-1 lines. Carriers using microwave systems are enjoying the ability to fully control their network while ensuring customer satisfaction and reaping cost benefits.