APPLICATION NOTE

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SL60 for Cellular Backhaul

Introduction

Each year around 500'000 radios are deployed worldwide. Network deployments in urban areas, especially LTE technology, have brought in reduction of cell size up to 500 m. Therefore 60 GHz Point to Point links, mainly used to produce links or nodes to connect two communication points are being used by Wireless Carrier for backhaul applications of Radio Base Stations.

Benefits of SL60 for Cellular Backhaul

- Small size (inconspicuousness)
- High data rate
- Interference free frequency band
- License free operation

Small size

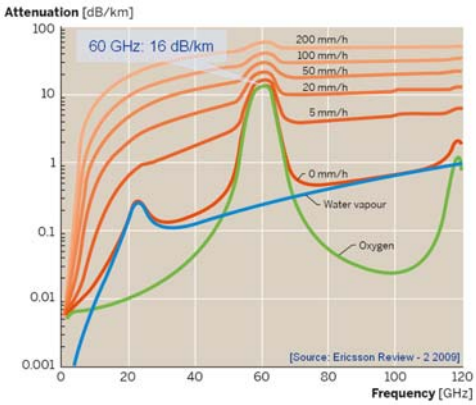
The minimization of Cellular Cell sites, demand of good coverage and capcity, has resulted in deployment of Radio equipment on street level. Consequently, the importance of size and appearance of radio equipment increased. SL60 has a small, integrated flat antenna, a very attractive value compared to other microwave links. It even can be integrated with the BTS in the same housing.

High data rate

The increased demand of media services on mobile devices has the network operators asking to increase the data capacity of the cell. This results in smaller cell sizes and data rates of up to 100 Mbps in backhaul applications. With 320 Mbps full duplex data capacity, SL60 offers higher data throughput than traditional microwave links.

Interference free frequency band

The coordination of frequencies is a major challenge in deployment of smaller cells as a high number of microwave links have to work together in a smaller area. This demands products which not create too much dispersion in the cell and work in narrow beam. SL60 provides the best solution of this interference problem by operating at 60GHz. At 60GHz, the air resonates and absorbs the signal making frequency regulation much easier. Therefore SL60 is very suitable for deployment in dense scenarios.



An additional advantage of 60GHz is the higher immunity towards multipath and reflections that occur when microwaves are deployed on street level.

License free operation

Operators usually prefer to use licensed frequency bands for their microwave links in order to assure quality of service. However, now the market is moving towards products operating in license free band to take advantage of OPEX reduction. Also, the fact that smaller cells are more focused in providing capacity than coverage makes the use of license free frequency band more attractive.

Summary

By providing solution to capacity problems of Wireless Carrier, mm-waves have come in more focus opening doors to more opportunities for SL60.