

Male in the Maldives

Getting the capital city of the Maldives talking

COBHAM

Case Study

The most important thing will build is trust

Overview

Cobham Wireless delivered a unique solution for the provision of mobile network coverage throughout Malé using a Distributed Antenna System.

Challenge

Faced with narrow streets, tightly packed buildings and restrictions on cell towers, the company worked with mobile operator Wataniya to deliver 2G and 3G coverage via distributed multi-band digital repeaters linked to a 'base station hotel'.



The Challenge

The Maldives, known as one of the most beautiful places in the world, consists of 1,192 islands, 26 atolls and numerous islets spread over a large area of the Indian Ocean. Its capital and populous city, located at the southern edge of North Malé Atoll is Malé.

Cobham Wireless has delivered a unique solution for the provision of mobile network coverage throughout Malé. Faced with narrow streets, tightly packed buildings and restrictions on cell towers, the company worked with mobile operator Wataniya to deliver 2G and 3G coverage via distributed multi-band digital repeaters linked to a 'base station hotel'.

The Maldives capital occupies an entire island which has been comprehensively developed. The narrow streets and densely built environment are not ideal for the RF (radio frequency) penetration required by mobile networks. That situation is further complicated by the civic administrators' understandable desire to limit visual impacts on the skyline. Wataniya, the operator covering the Republic of the Maldives in the Indian Ocean, turned to Cobham Wireless to design a solution that allows the commercial opportunities to be exploited, without the need for traditional cell towers.

The Solution

In what is believed to be the first installation of its kind, Cobham Wireless solved Wataniya's problem by applying fibre Distributed Antenna System (DAS) technologies, which are normally associated with providing mobile coverage indoors. A central site has been equipped with a number of base stations that all receive and transmit via a single cell tower and these base stations are linked by fibre optic connections to Cobham Wireless' multi-band repeaters. The repeaters are distributed around the island to create coverage 'clouds' where required. The island now has comprehensive mobile voice and broadband data services that can be easily upgraded when further capacity is required.

The Benefit

Lawrence Autry, CTO at Wataniya, commented "the layout of Male, with its dense buildings and narrow streets, raised a unique set of challenges that we needed to overcome in order to successfully deploy outdoor 3G coverage. Cobham Wireless allowed us to solve these issues and provide 3G coverage at street level in a cost effective and efficient manner."

Ian Brown, CEO, Cobham Wireless, continues "this was a challenging coverage issue that we addressed by using an outdoor coverage solution, fixed to a specific location, that is able to propagate network coverage over a wide area. Using this network design



principle, mobile operators have the flexibility to provide additional coverage to meet capacity, and subscriber demand for voice and data services. New high-speed mobile networks, such as those based on LTE technology are going to require a significant increase in cell towers. The sort of network we provisioned in the Maldives is an alternative approach that may have application for environmentally sensitive installations in major urban centres.”

Cobham Wireless was the only supplier that could deliver the complete system based on its own range of equipment, resulting in several key advantages:

- Innovative and future proof cellular coverage solution.
- One common supervision system that manages all equipment.
- System design, commissioning and maintenance could be simplified as the modules and equipment came from the same supplier.
- There was a sense of continuity as only Cobham Wireless engineers were needed to interface with the customer throughout the project as they had complete knowledge of the system.

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