



# Fibre Through the Air Technology Connects UK Military Base

## ABOUT BFBS

BFBS Media Innovation is part of BFBS, which provides broadcast and media services to the UK Armed Services worldwide.

BFBS is a charity, committed to providing the UK military with a welcome part of ordinary life in extraordinary situations. Entertainment, news, sport and information services build morale by connecting those serving overseas to life back home - offering them a way to feel happier, know what's going on in the world, share experiences and build communities.

A vital part of the serving military, BFBS has been keeping the UK Armed Forces connected



and in touch with home for 75 years. Wherever they are in the world, whatever device they're on, BFBS technology solutions are proven in some of the most remote, physically tough terrains in the world.

BFBS Media Innovation is constantly striving to create the best solutions to enable and enhance broadcast and communications, especially in extremely challenging environments, dealing with a multitude of legal systems, protocols and restrictions, which create lots of technical challenges.

The MiPlayer platform is specifically designed to deliver media to remote locations where internet and mobile phone signal solutions are not possible due to lack of connectivity and infrastructure, location or as a result of natural disaster or conflict.

## THE PROJECT

Wi-Fi coverage is a fundamental communications requirement at most Armed Forces locations. It is used not only for internet communications, but often to deliver invaluable BFBS broadcast and media services to the serving military in order to boost their morale in difficult conditions and circumstances.

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This particular project required wifi for media delivery - with limited internet access present, took place at a military base in Afghanistan where, at any one time, there could be up to 400 serving military and staff at the camp - a multinational UK led team, all requiring communications and reliable, uninterrupted Wi-Fi. This represented a significant challenge in such a remote location, where security was also a critical factor - so robust and capable technology was vital.



### CHALLENGING TERRAIN

For various practical reasons and given the nature of the site, it was not practical to install cables to some key routes. But the BFBS/ Purdicom relationship meant that BFBS Media Innovation was able to identify the perfect solution early on in the project specification. During a discussion around the Siklu MultiHaul PTMP millimeterwave technology at

a Purdicom open day, BFBS quickly realised that they had an opportunity to solve the issue of being unable to use pits and ducts for the military base project's entire requirement. The Wi-Fi could be beamed through the air at super-fast speeds via a technology dubbed 'fibre through the air'.

This revolutionary option was a massive breakthrough to the project and meant that Wi-Fi could be connected easily, quickly and cleanly without the need for heavy ground-breaking

### METAL BUILDING PRESENT CHALLENGE

The camp is made up of ruggedised buildings, designed to be protected from mortar attack. This creates a challenge as heavy metal doors and ceilings can easily block Wi-Fi signals. By introducing best-of-breed technology recommended by Purdicom, BFBS Media Innovation was able to make use of the Siklu backbone Gigabit speeds. This was achieved in conjunction with the Ruckus access points, providing outdoor and indoor connection, which completed the end-to-end solution.

### TEMPERATURE & ENVIRONMENT

Most equipment is temperature sensitive. The weather conditions of the Afghan camp were exceptional, ranging from highs of well over 50 degrees C in the daytime to below -10 degrees C by 10pm at night. Any solution had to be robust enough to withstand these extreme fluctuations in temperature - requiring superior equipment, technology and management in order to provide consistent and seamless connectivity.

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In this case the extreme temperatures were not the only challenge. The area also experiences frequent dust and sand storms and snow, which has the potential to play havoc with the equipment and the signals being transmitted.

For many wireless solutions this would be a significant problem but, due to Siklu's robust design and unique build, these conditions represented no issue at all. In fact, with the auto aligning capabilities of the equipment, BFBS Media Innovation was able to install and configure the entire gigabit-capable network.



### WORKING WITH LOCAL ISPS

Getting the equipment to site was the first part of the project. Connecting to existing backhaul was the next hurdle. When the broadcast engineers arrived, they discovered there were already three ISPs at work in the camp, all using sub 6Ghz wireless solutions. As a result, the engineers found that the area was completely saturated with "5Ghz noise".

BFBS Media Innovation needed a solution, completely separate, from that frequency - and one that would supply reliable connectivity to the access layer.

With Siklu's MultiHaul PTMP, the company was able to make an affordable jump from sub 6Ghz interference to virtually interference-free 60Ghz.

The result? A dramatic improvement in the morale and well-being of the military serving at the camp in Afghanistan.

## THE RESULTS

The project solution was enabled using two x Siklu MultiHaul PTMP Base units and eight x Siklu Terminal units, Ruckus T310 outdoor AP's, and R510 Wave 2 AP's. The whole project was completed in just one month and connected the camp to MiPlayer, allowing the military serving in the camp to access the best of UK TV, premier sport and a range of other media services.

Building on the successful installation in Afghanistan, BFBS Media Innovation is looking to roll-out this deployment methodology for all MoD camps.

**Call Purdicom +44 (0) 1488 647 492**