

Case Study

VIAVI InterferenceAdvisor: The Twelve-Minute Interference Locator

Identifying the location of a chronic interference source in just twelve minutes.

Identifying interference in a multi-path environment is challenging. Understanding the characteristics of the interferer (e.g., intermittent, single tone, multi path, oscillating, band noise, etc.) is critical for effectively tracking down the source with minimal time and effort. InterferenceAdvisor, with its smart analytics, can efficiently identify the characteristics of the signal anomaly, thereby quickly locating the source of the offending signal.

The Challenge

A tier one UK operator was suffering from RF interference issues, and conventional methods for locating interference proved to be unsuccessful. The operator’s RF performance team reached out to VIAVI with two goals in mind: validate the performance of InterferenceAdvisor, and locate the chronic interference source.

Solution

VIAVI InterferenceAdvisor™ automates the entire interference hunting process with a few simple steps. Drive to the cell site suffering from interference, tap in the cellular frequencies affected, and drive around the area to allow the algorithms to identify the interference source. Before long, the EagleEye™ software displays a map showing an area of interest, followed by an address or building to focus on.

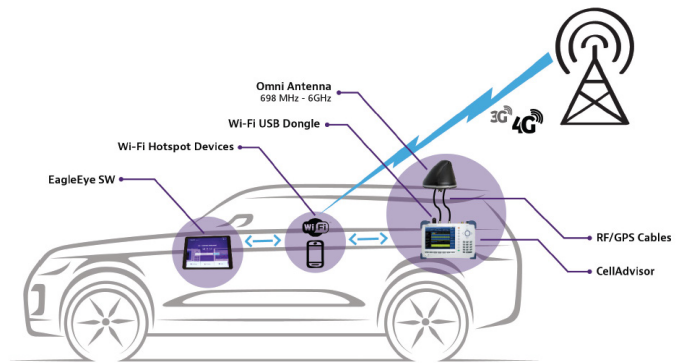


Figure 1. InterferenceAdvisor solution

Quick Drive for Interference Hunting

After discussing with the operator the area where the interference issue was present, the team set out for a drive with InterferenceAdvisor. The cellular base station covering the area of interference was housed within the church grounds shown in figure 2.



Figure 2. Church building housing the base station



Figure 3. Building identified as the location of the interference source

The interference signal was detected within the coverage area of the victim cell and was localized within 12 minutes following a guided drive around the area. After using VIAVI AntennaAdvisor™, they were able to validate that the source of interference was located on the school premises shown in figure 3.

Results

The operator later approached the school directly, explained to them the findings, and managed to get them to switch off a coverage enhancer inside the building.

The operator subsequently confirmed that the interference has disappeared ever since.

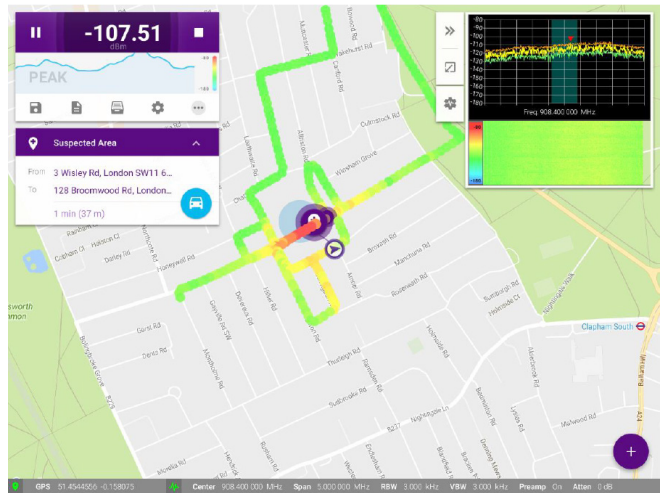


Figure 4: InterferenceAdvisor locating the interference source

Operator feedback:

"...very easy to use, very quick to find the source, really nice user interface, much better than competitive solutions we have seen."