

C3IA deploys a 16 node network with 40+ Mbps at DSEI 2017



Background

Defence and Security Equipment International is an biannual event which brings together the entire defence and security industry to source the latest equipment and systems, develop international relationships, and generate new business opportunities. DSEI is attended by over 32,000 attendees and 1400 exhibitors and takes place in the ExCel Exhibition Centre in London Docklands across 2 exhibition

The Challenge

In a busy exhibition environment there are several challenges; node location is driven by opportunity rather than optimal placement, the RF environment is largely congested, even down to localised interference on a node by node basis and transmission power is largely limited to around 500 mW to negate the need for a license to transmit.

For a normal network deployment, RF reces and siting plans would be made, but at a trade show radios are typically at waist level on display, reducing the advantages gained by elevation of antennas

The C3IA Solution

In conjunction with several partners, C3IA deployed radios in various booths within the exhibition area, as well as locations outside of the ExCel centre. Exterior locations included apartment blocks, vehicle fitted radios and on a boat moored at the docks. A total of 4 HD video feeds were viewed live at the C3IA booth, some of which also featured full PTZ (Pan-Tilt-Zoom) control. In addition to the C3IA generated video feeds, other partners were deploying their own video systems and demonstrating live HD video feeds on their own stands. An aggregate of 40+ Mbps of full motion video data was flowing through the network at any given time, without any problems or incidents

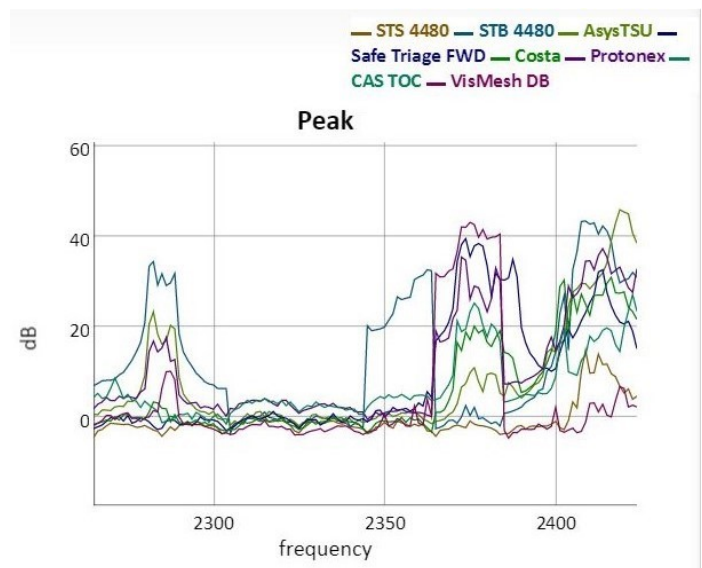


Figure 1. Network wide spectrum scan from the DSEI radios.

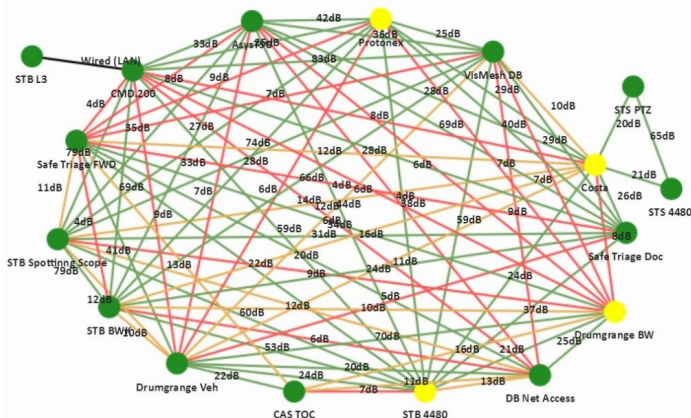


Figure 2. Network topology with 16 nodes

Summary

Despite the high levels of interference present at the exhibition, C3IA was able to quickly and effectively deploy a high bandwidth network featuring multiple HD, full motion video streams. This network demonstrated the capability of the Silvus SteamCaster radios to outperform the competition in the harshest of RF environments