

C3IA demonstrates mobile HD video surveillance capability with a static control station



Background

Mobile surveillance is challenging in all aspects, especially when on foot in a built up urban environment where line of sight communications cannot be guaranteed.

The target must not be aware of the operation, and if there is a live video feed, then the supervisor must ensure that the route back to the control point is constant and capable of supporting the data throughput back to the monitor station and facilitate voice control of all operators

The Challenge

In a simulated surveillance operation the monitor station must direct a team of 3 mobile units to provide live HD video in an urban area. The monitor station is in a static location, and must be able to view the streamed video and monitor the network status to ensure that the camera operator always in the network.

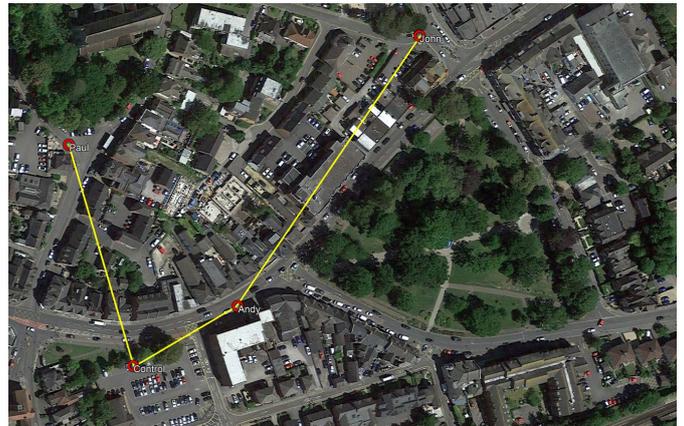


Figure 1. View of the area used, showing initial positions and connectivity

The C3IA Solution

The surveillance monitoring station was set up in car park in the south-western corner of the area chosen for the activity. The camera operator started from the monitor station and the other mobile units parked at random places around the area. All radios formed a network and through the use of the intuitive, GUI based, StreamScape Network Manager map overlay feature, built into every radio the monitor station was able to direct the three mobile units, all the time ensuring that the camera operator had a robust radio link back to the monitor station.



The multicast voice talk groups enable communications to be established across the whole network, or if necessary between sub-groups to ensure targeted interchange between specific users.

Summary

The StreamScape management GUI, built into every radio and compatible with most web browsers allows network managers to monitor network behaviour, carry out diagnostic activity such as spectrum scans and as has been demonstrated can be used to control the positions of nodes to optimise network performance. The Silvus SC4200 radio, powered by the MN-MIMO, is the only advance tactical radio employing transmit and receive Eigen beamforming, delivering a high throughput, full duplex solution that enable multiple data streams in either direction simultaneously.

Figure 2. Camera unit with camera and radio circled in yellow.