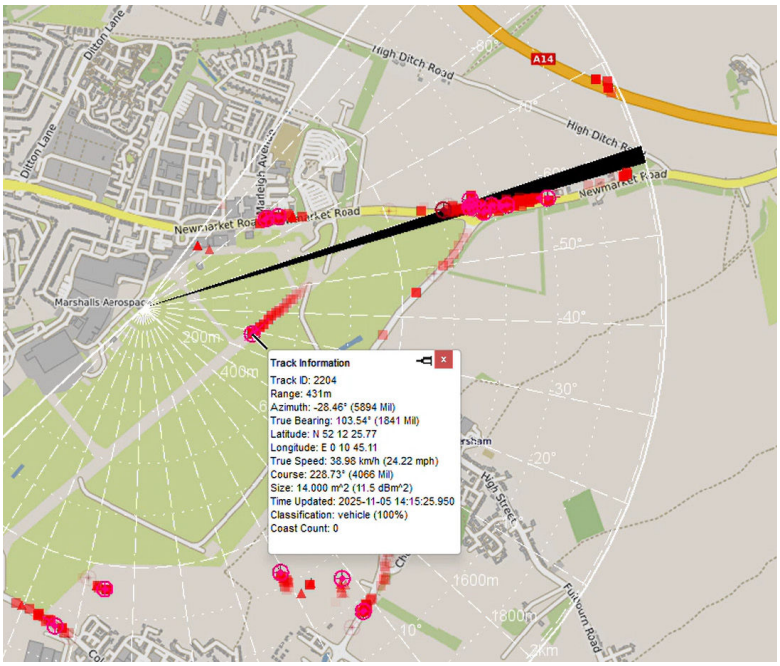
Blighter® BlighterNexus Track



- Designed for surface based and low-flying targets
- Unique Kalman filter provides real-time adaptability to different environments and varying targets
- Optimised for Blighter radars, uses probabilistic data association to lower false track creation rate and improve the probability of track formation
- ITAR-free
- Web interface for remote configuration and monitoring
- Simplified configuration for improved performance in demanding conditions

BlighterNexus Track is a target tracking application designed specifically for Blighter radars. It converts the instantaneous target plot data from the radar into target tracks that provide additional target motion information. It is functionally compatible with the original BlighterTrack application but provides enhanced performance thanks to its closer integration with the Blighter radar internal signal processing unit.

In typical ground based radar surveillance applications, it is common for the radar to produce many target detections from both the targets of interest and other so called nuisance-alarms. These nuisance-alarms are genuine moving objects, such as wildlife, wind-blown vegetation or reflections from buildings etc, but are of no interest to the security manager. A typical tracker will try to associate nuisance-alarms on a scan to scan basis and create unwanted false tracks. BlighterNexus Track on the other hand uses an adaptive Kalman filter and Probabilistic Data Association algorithms to ignore the false tracks and instead, track the genuine targets of interest.

The Blighter radar provides a wealth of information about the characteristics of each target plot that it detects. BlighterNexus Track uses this additional data to pre-screen the plots that will be used to track a target. For example if the Tracker is following a slow moving object and the next plot contains micro-Doppler information indicating high-velocity, then the BlighterNexus Track will ignore this data and instead use plot information with closer matching characteristics. A conventional tracker may be seduced by this non-associated target plot and produce a tracking error.

BlighterNexus Track is designed to provide an invisible tracking function for Blighter radars. Although it runs on a PC, typically used for the Command & Control (C2) application, BlighterNexus Track does not have its own radar display interface. The BlighterNexus Track is configured and monitored using a web-interface, which allows both local access and long-distance remote access, if suitably configured. The operation of BlighterNexus Track is typically viewed on a C2 application, including the BlighterView HMI. The simple operation of BlighterNexus Track allows multiple instances to be run on a single PC or Server. Typically between six to ten instances of BlighterNexus Track may be operated on a Server at once, but this is subject to both the Server's processing and memory capabilities and the nature of the environment being scanned by the radar.