

# VIPER/PREFIX SOFTWARE

Pre, during and post-mission analysis tools

## RF TO INTELLIGENCE

The VIPER/PREFIX software suite is common to the suite of Roke products providing cutting edge signal processing, machine learning algorithms and visualisation to enhance analyst efficiency. Geolocations are generated and reported in real time informing tactical decision making by the local commander. VIPER/PREFIX supports FVEYS messaging formats to support processing and dissemination into the wider intelligence picture.

## WORKFLOWS & VISUALISATIONS

VIPER and PREFIX are designed for ease of use by UI experts and EW Operators. PREFIX (live EW operations) focusses on spectral survey, interrogation and monitoring of target emitters with powerful features delivering detection, geolocation and monitoring. VIPER (pre & post mission analysis) delivers planning, analysis, reporting and dissemination of information to other Battle Management Systems or allies.

## MULTI-DOMAIN INTEGRATION

VIPER/PREFIX software is available independently from the Roke EW products and can integrate other third party sensors and effectors. Electronic Attack, Cyber Effects, RESM/ELINT and Drone Detection can all be incorporated into a centralised, EW visualisation.

## INTERFACES

VIPER/PREFIX supports IQ streaming and management and reporting of other sensor and effector data. It also can ingest and export mission plans. This makes it simple to integrate this cutting edge software with in-service systems to provide a consolidated, single software EW toolset.

## SUPPORT & TRAINING

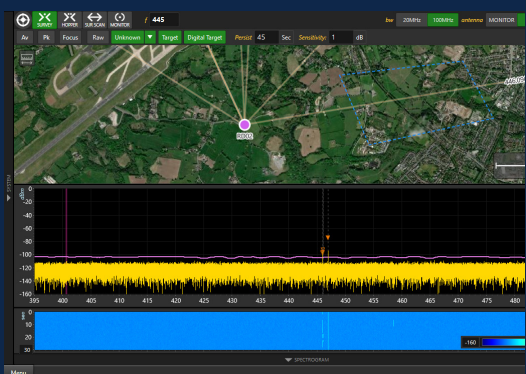
VIPER/PREFIX are operationally deployed accompanied by training and support delivered by our EW specialists. Roke delivers bespoke packages optimised to our user requirements and delivered by domain experts. The CEMA simulator enables offline training. Software capability enhancements updates are available every 6 months.

## FEATURES

- Workflow based operation, User configured to mission
- Geofencing, Heatmapping and POIs for map regions of interest
- Wideband presentation of detection, DF and spectral data
- Position fix targets via networked nodes
- Wide range of native and 3rd Party demodulators and classifiers
- Path profile propagation planning to optimise EW deployment laydown
- Launch Electronic Attacks in response to ES triggers

## BENEFITS

- Simple to operate common UI with automated operator aids
- Integrate third party sensors or effectors
- Open WebAPI for integration into national infrastructure
- Training & Support delivered by EW domain experts



# VIPER/PREFIX SOFTWARE SPECIFICATIONS



PREFIX	
Workflows	Survey – process unknown emitters Monitoring – a target list Infrastructure Survey – scan and process digital infrastructure Electronic Attack – responding to RF stimulation
Detection Threshold	Wideband SNR threshold
Visualisations	Mapping / Wideband DF Wideband Spectrum & Spectrogram Peak Hold, Filter & Highlight
3 <sup>rd</sup> Party Demodulator/Classifiers	Go2 and Wavecomm integrations
Native Demodulators	SSB, AM, FM, WFM, GSM, THURAYA, DMR, TETRA
VIPER	
Workflows	Radio – radio path propagation modelling for ES, EA and Comms Plan – pre mission planning of target and ignore lists Find – post mission analysis of intercepted signals
Search Functions	Priority, Digital ID, Demod, Audio, Geolocation, Geofence, GIST
Mapping	
Geolocation Methods	Angle of Arrival, static or moving sensors
Mapping Features	Geofences, POIs, Geolocations, Heatmaps
Mapping Formats	Geopackage format (gpkg), raster formats, WMTS.
Units	MGRS, NATO MILS, Degrees, Lat/Long decimal/DMS
Heading & Location	True/Mag North, Internal/External GPS
Mission Data	
Targeting Methods	Multiple Target List management & Ignore Lists
Open Standards	Web API, JICD (LCA) and CESMO
Integrations	Electronic Attack, Offensive Cyber, ESM, ELINT, Drone Intercept