



# RFEYE<sup>®</sup> MISSION MANAGER

Automated spectrum monitoring  
& mission management



[www.crfs.com](http://www.crfs.com)

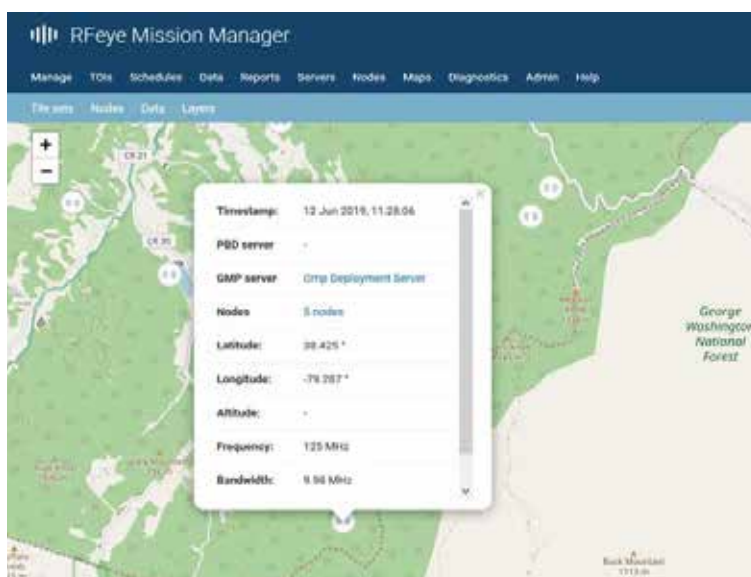
 **CRFS**

**EXTRAORDINARY  
RF TECHNOLOGY**

# AUTOMATED MULTI-MISSION SPECTRUM MONITORING

RFeye Mission Manager is CRFS' flagship solution for automated spectrum operations. It enables spectrum stakeholders to derive useful and actionable intelligence from their deployed RFeye receivers without the need for teams of RF experts. It was designed for use with RFeye assets deployed over wide areas such as military ranges, test sites, country borders, and cities. However, it can also be used in small networks such as in-building TSCM monitoring.

RFeye Mission Manager is controlled via a web browser interface. It enables users to perform automated or scheduled spectrum monitoring tasks without being faced with a "wall of spectrum data." Sweeps, scans, and surveys can be quickly set up. And authorized transmitters, operating zones, and geolocations are clearly displayed alongside near-time incidents and alarms.



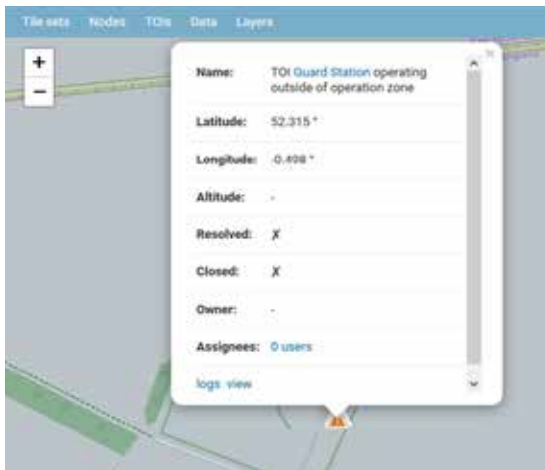
## GEOLOCATION

Automatically geolocate signals of interest based on frequency, bandwidth, signal location, time and power. These geolocations can either be generated directly within RFeye Mission Manager or fed in from RFeye Site software. Each geolocation is displayed on the map view with information on longitude, latitude, altitude (when using 3D TOA), frequency and bandwidth.

# AUTOMATION

## Spectrum tasks

Set up spectrum tasks in advance such as spectrum occupancy, time and geolocation scans as well as sweeps and signal surveys. These tasks can be scheduled to run and then monitored via the calendar interface, providing you with a clear overview of what is happening and when.



## Incidents and notifications

If there is a breach of conditions (e.g. an unauthorized transmission, signals in the wrong area or at the wrong time) for example, alerts are raised automatically. They can be displayed on the map if there is a geolocation, or sent via email for action. You can choose to receive emails based on the severity of the incident – “Information only,” “Warning,” “Error,” or “Critical.”

## Third party scheduling imports

Using a scheduling system such as IFDS or TRMS to manage a mission or military exercise involves manually entering data to generate monitoring activities and create reports—which takes a long time. With RFeye Mission Manager, you can load the data in seconds and automatically create a multi-mission plan to monitor the RF spectrum and generate reports on range activity.





# VISUALIZATION

## Simple visualization tools

Not everyone understands or wants to view spectrum data. Therefore, RFeye Mission Manager uses a standard web browser interface to provide clear, simple views of the RF environment. The map view clearly displays authorized transmitters and operating zones and shows geolocations, incidents, and alarms in near-time.



## Zones of interest/geofences

As well as monitoring signals of interest, you can also set up specific geographic zones. If a signal moves into or out of these zones, RFeye Mission Manager can trigger alerts and activities. For example, if a signal moves into Zone 1, a schedule can be automatically triggered to record the signal data and geolocate its source. But if the signal moves into Zone 2, an alert could be raised and sent to the relevant individuals, or fed into a C2 system.



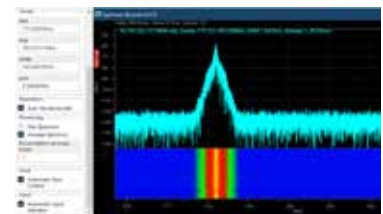
## Map overlays

You can easily augment the standard street and satellite view of the map screen by adding your own map overlays. These could be up-to-date satellite images, technical schematics or even hand-drawn annotations.



## Transmitter of Interest (TOI)

If you have a known transmitter that you want to monitor, you can assign it as a Transmitter of Interest (TOI) and use your own custom icon. RFeye Mission Manager will automatically track the TOI's movements, signal occupancy and modulation while monitoring it against a geofence for authorized or unauthorized activity.



## Spectrum view

There are occasions when you may want to view live spectrum, for example to verify that a signal is currently being broadcast. RFeye Mission Manager lets you view live spectrum data at the touch of a button.

# SCHEDULE MANAGEMENT

## Schedule calendar

RFeye Mission Manager clearly shows you the scheduled spectrum tasks that are due to be carried out by month, week and day. You can zoom in to view individual schedules and the associated tasks.

## Spectrum coverage

Spectrum coverage allows you to see the schedules and tasks in time over frequency. This makes it simple to see if any schedules are due to take place at the same time or frequency. This could indicate that two or more missions might cause co-channel interference.



# REPORTS



## Spectrum reports

RFeye Mission Manager can automatically generate a number of reports and data captures, including:

- Signal occupancy reports - Shows percentage occupancy of a portion of spectrum
- Signal power reports - Shows changes in transmitter power
- Sweep data - Shows if signals are being transmitted within a spectrum range

These reports can be distributed to other interested parties automatically or on request.

# MANAGEMENT

## Central receiver management

Maintaining and updating firmware and software on remote RF receivers can be challenging, but this can be done centrally with RFeye® Mission Manager. For example, if 10 receivers all need the latest software patch, you can automatically update them simultaneously at a convenient time.



### System status

RFeye® Mission Manager gives you instant access to the status of your assets including the Nodes, server, GPS and RF activity status. Any errors or warnings can be automatically sent to your email or phone.

### User management

RFeye® Mission Manager gives you complete flexibility over user permissions. You can assign personalized user permissions or manage user groups to limit access to certain parts of the system.

# FEATURES

## RFeye® Mission Manager

Near-time control of Nodes and data analysis	✓
General signal detector	✓
Custom signal detector	✓ (set up in RFeye® Site and export)
Incidents, alerts, and notifications	✓
Operating System	Linux
Map view	✓ (inc map overlay)
Zones of interest / geofences (inclusion/ exclusion)	✓
Network status and diagnostics	✓ (diagnostics for the future)
Multi-user	✓
I/Q capture	✓ (limited)

### Spectrum Monitoring

Triggered tasks	✓
Generate reports	✓
Scheduled tasks	✓ (inc calendar view)

### Geolocation

TDOA geolocation (sample and detector-based)	✓
3D TDOA	✓
AOA geolocation	✓
POA geolocation	✓

### Schedule

Monitoring activity	✓
Groups of activity to build a picture	✓
Sweep scan	✓ (PoA, Geolocation)
Occupancy scan	✓
Time scan	✓
Signal survey	✓
Bearing scan	✓
Detection scan	✓
Remote recording scan	✓
Signal power report	✓
Signal occupancy report	✓
GPS status report	✓
Node status report	✓



## CRFS SOFTWARE SUITE



You can use our software products individually or the whole software suite of products based on your operating requirements. Talk to your CRFS account manager or contact [support@crfs.com](mailto:support@crfs.com)



### RFeye® Mission Manager

Automated spectrum monitoring & mission management



### RFeye® Site

Real-time spectrum monitoring & geolocation toolkit



### RFeye® DeepView

Forensic signal analysis with 100% probability of intercept (POI)



## EXTRAORDINARY RF TECHNOLOGY

CRFS is an RF technology specialist for the defense industry, national security agencies, and systems integration partners. We provide advanced capabilities for real-time spectrum monitoring, situational awareness, and electronic warfare support to help our customers understand and exploit the electromagnetic environment.



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