DEPLOYMENT STORY

BUILDING AN RF MONITORING NETWORK ACROSS FRANCE

How ANFR chose a long-term solution for spectrum monitoring & emerging tech while ensuring safety during major sporting events

Domain: Land

Application: Spectrum monitoring

Customer: Regulator

PROBLEM – FACING MANY DIVERSE CHALLENGES

The Agence Nationale des Fréquences (ANFR – National Agency of Frequencies) manages all radio frequencies in France. It is also the entry point for satellite operators to register their frequencies in the International Telecommunications Union's (ITU) international register.

ANFR needed to implement a robust, ITU-compliant spectrum monitoring solution in multiple phases over several years. The agency wanted to create an infrastructure capable of proactively managing frequency allocation, license holders, spectrum occupancy, and large events. It also wanted to identify gaps to meet new demand for spectrum while addressing CAPEX challenges.

So, it issued its first tender in 2016.

RESPONSIBLE FOR ONE OF EUROPE'S LARGEST AND MOST POPULOUS COUNTRIES, ANFR FACES A RAFT OF DAILY CHALLENGES

- Planning all RF frequencies and managing all RF users
- Controlling the spectrum
- Managing incidents such as targeted jamming
- 5G rollout
- Ensuring major sporting events run smoothly without interference (Le Mans, Tour de France, Paris Olympics 2024)
- Monitoring public exposure to electromagnetic waves
- VHF maritime network operation for safety at sea
- Ensuring amateur radio operators at home and abroad enjoy reliable transmissions
- Ensuring good reception of digital terrestrial television (DTT) signals

SOLUTION – A FLEXIBLE & VERSATILE INFRASTRUCTURE IMPLEMENTED IN MULTIPLE PHASES

ANFR selected CRFS as its spectrum monitoring partner to implement fixed and mobile spectrum monitoring solutions. The agency also wanted specific help to manage major planned events, including the 2024 Paris Olympics.

During phase one, ANFR invested in multiple RFeye Nodes (high-performance RF sensors), creating a spectrum monitoring infrastructure across France. In addition to hardware, the agency also purchased powerful software that supports real-time spectrum monitoring, automated spectrum reporting, and incident monitoring.

During phase two, the agency invested in even more powerful RFeye Nodes, which were integrated with plug-ins for geolocation.

In phase three, ANFR requested that CRFS supplement the existing network with additional, small form-factor RFeye Nodes (40-8) and RFeye Mission Manager software for automated spectrum management. The goal was to support spectrum monitoring and RF interference management for the Paris 2024 Olympics.

RESULT – A HIGHLY VERSATILE SYSTEM AT A COMPETITIVE PRICE

The longevity of the relationship between ANFR and CRFS attests to the success of the partnership. ANFR is very happy with the reliability and capability of the RFeye ecosystem—which it finds to be highly versatile and reliable, providing essential solutions for real-time spectrum monitoring, interference hunting, geolocation, task automation, and major event management.

Over the past eight years, ANFR has found and optimized solutions to:

- Build spectrum monitoring infrastructure across France
- Address a shortage of sensors and operators
- Proactively manage frequency allocation and usage and identify gaps
- Redesignate underused frequency to drive revenue and support new applications (for example, the 698–806 MHz band has been freed up)
- Adhere to and uphold ITU guidelines
- Meet major sporting event spectrum demand
- Efficiently manage RF interference and geolocation
- Defending French orientations nationally and internationally

"CRFS ARE EFFECTIVE LONG-TERM PARTNERS, AND THEIR SPECTRUM MONITORING AND MANAGEMENT SOLUTIONS GIVE US PRACTICAL ANSWERS - NOT JUST DATA."

Guillaume Lecul, ANFR Manager

Want to talk spectrum operations for large-scale events?

Talk to us

*Deployment arranged by **Kerry Mertz***

EQUIPMENT USED

RFeye® Receiver (Node)

High-performance spectrum sensor (receive / record) to 40GHz

RFeye® Site

Real-time spectrum monitoring & geolocation toolkit

RFeye® Mission Manager

Automated spectrum monitoring & mission management

CRFS | EXTRAORDINARY **RF TECHNOLOGY**

CRFS is an RF technology specialist for defense, 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.

CRFS Inc
Chantilly,
VA, USA
+1 571 321 5470

CRFS Ltd
Cambridge,
United Kingdom
+44 (0) 1223 859 500

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