

DF Commander MK2

Software for the remote control, monitoring and integration of radio direction finder systems into VTS network architectures

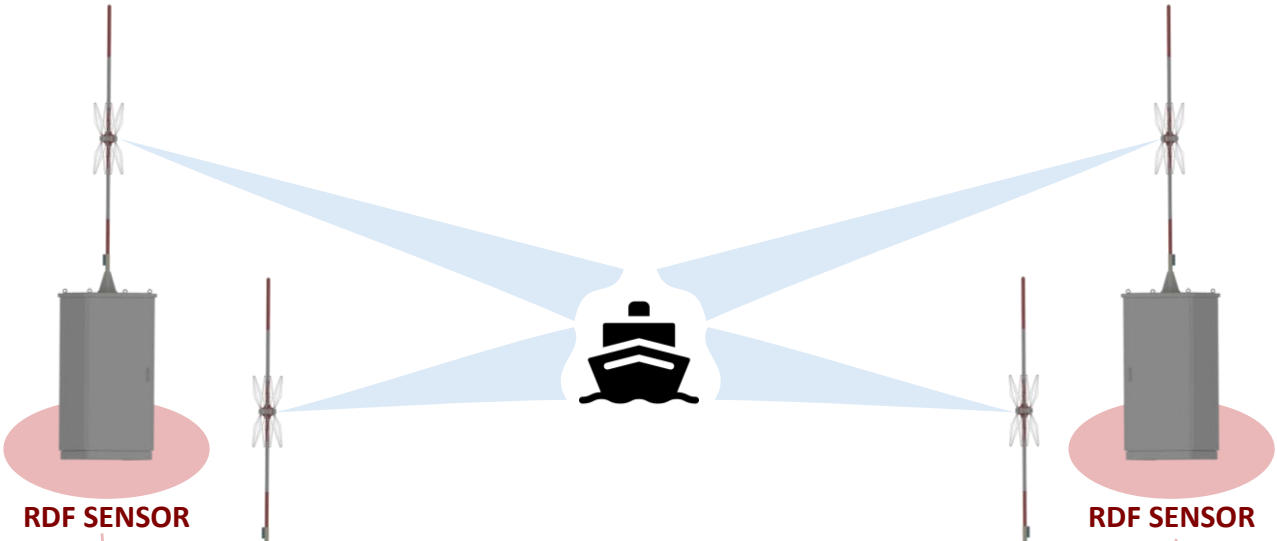
Talk on the Air? We've Got the Where!

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DF Commander MK2 Covers RDF-Solutions for Vessel Traffic Services ...



RDF SERVER

REDUNDANCY

VTS RDF
DATA VISUALISATION



ASTERIX

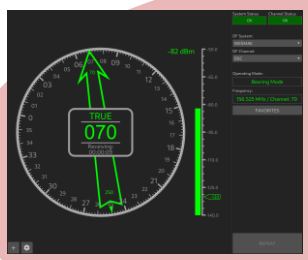
TECHNICAL
MONITORING



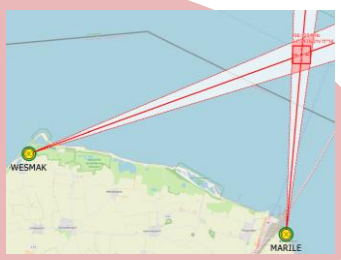
GLOBAL MONITORING, SNMP
DATA LOGGING
RDF CONFIGURATION

RDF AUDIO

PTT INTERFACE

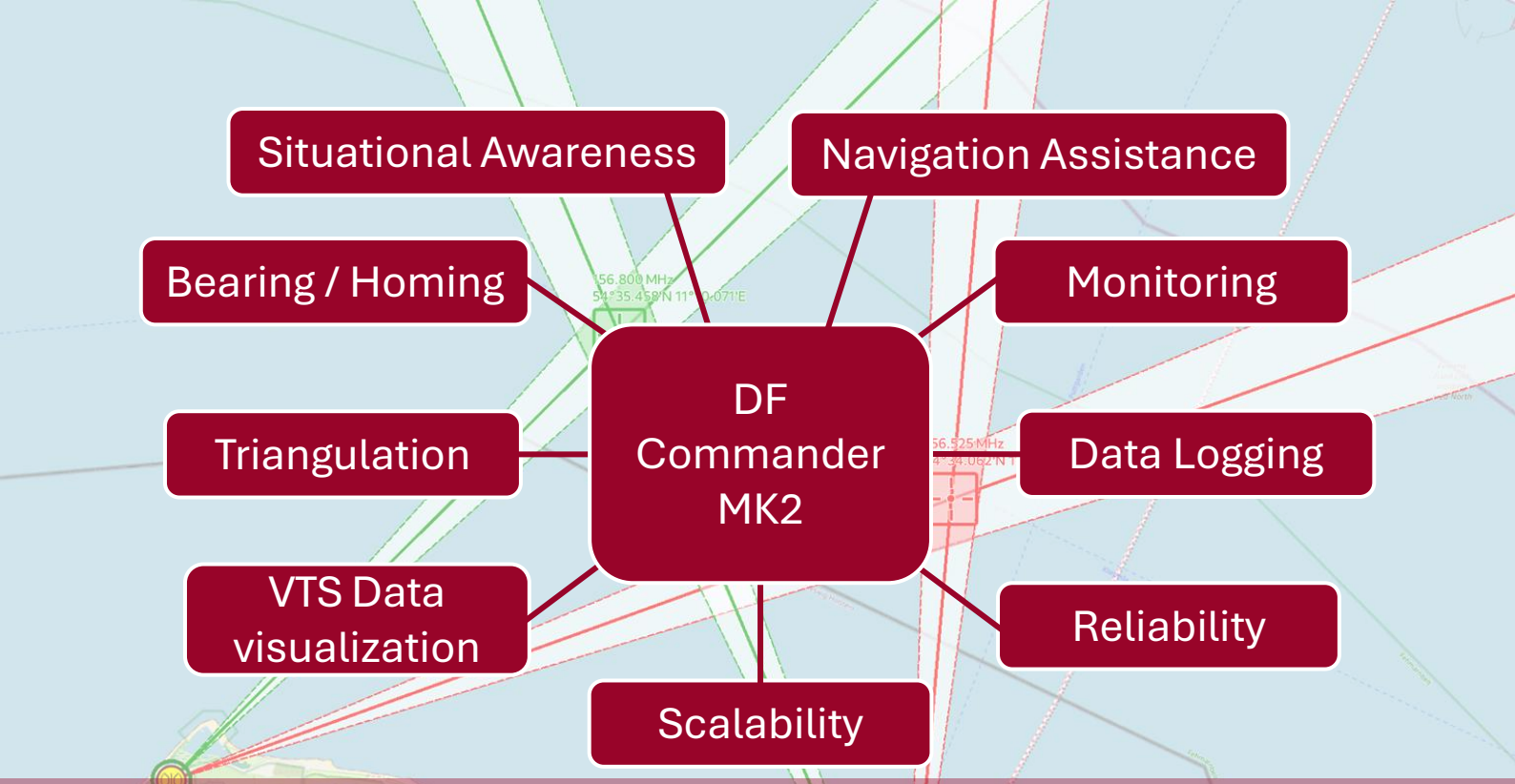


BEARING



TRIANGULATION

SELF BEARING
SUPPRERSION



DF Commander MK2
All features at a glance

Search and Rescue Operations
- Real-time data management
- Direction and distance to GPS-position of COSPAS-SARSAT beacons
- Bearing visualization on the map
- Usage of additional tools such as GPS and compass for accurate calculations
- Triangulation calculations

Monitoring Operations
- Errors and warnings detection
- Multiple screens at the same time
- Ship movements or RDF sites overview
- Signal and squelch level fluctuations

Remote Control Operations
- Manage RDF setup
- Change device parameters
- Enable or disable specific device

Optional Features (Addons)
- Conversion to ASTERIX format
- Conversion to user specific data format on request
- Data logging
- Technical status logging
- Supervision (SNMP protocol)

Flexible Site Integration
- Onshore
- Offshore

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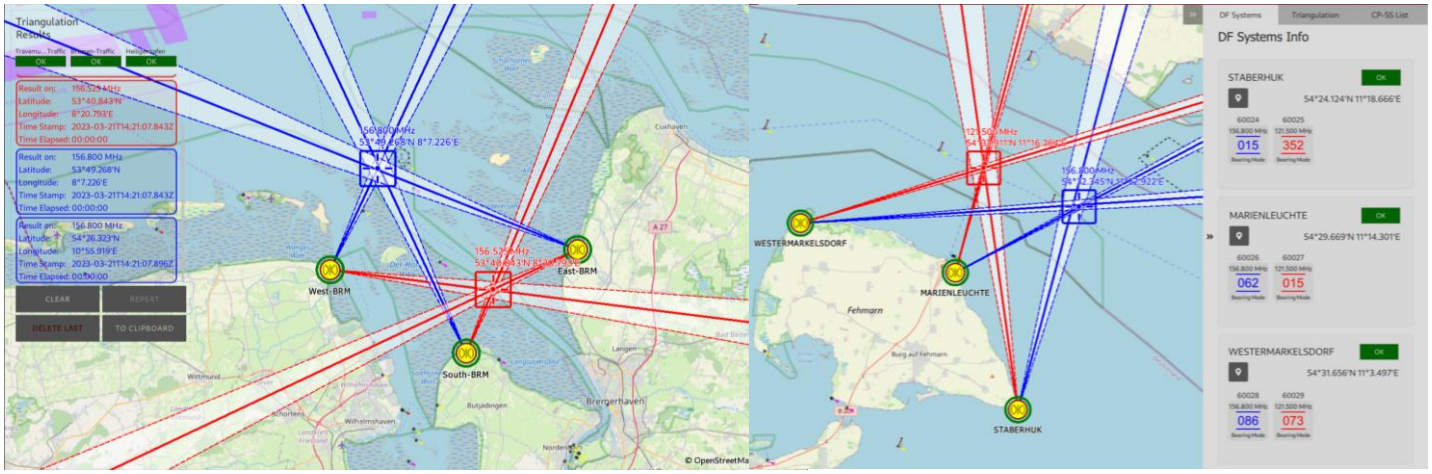
Benefits of Radio Direction Finding in Vessel Traffic Services

Faster Vessel Identification

Growing traffic density and a shortage of traffic controllers create several challenges, including identifying the watercraft transmitting signals. While radar and other surveillance systems provides detailed information about vessels, they do not share their exact location with maritime controllers. This is where the radio direction finder comes into play. The system detects the vessel transmitting the signal and displays its precise location and the direction of arrival directly on the controller's screen based on their radio signals. The information appears as bearing lines and coordinates on the radar, making ship identification faster and more efficient.

Eliminate Call-Sign Confusion

With increasing maritime traffic, one of the biggest challenges for vessel controllers is accurately identifying the watercraft transmitting radar signals. As similar call signs and poor audio quality often demand extra attention, especially during periods of high workload and stress, which can lead to call sign confusion or errors.
For that the **RDF system** simplifies operations **by automatically displaying** the **direction** and **location** of transmitting vessels on the radar screen. This saves valuable time, **reduces call sign confusion**, minimizes miscommunication, and assist in quickly resolving readback errors by streamlining the identification process.



Assist in Navigation

In areas with limited radar coverage, such as remote coastal waters or during adverse weather, vessels can easily become disoriented. In these situations, maritime controllers can use RDF systems to **pinpoint a vessel's exact location** and the direction of its radio signal. This technology helps guide vessels safely to their destinations while providing a **cost-effective solution** to enhance situational awareness, support navigation, verify mariner reports, and ensure safe operations at sea.

Provide a back up solution

In emergencies such as **GPS navigation failures** or transponder malfunctions, **RDF systems** play a crucial role by identifying a vessel's position through its radio transmissions. This capability enables controllers to provide effective guidance to the ship, ensuring **navigational safety** during critical situations.

Save Lives

Every second counts at sea. RDF systems make rescue operations **faster** and more **efficient** by instantly locating distress signals and guiding responders to the right position. Whether in bad weather or remote waters, RDF provides a reliable tool that improves safety and helps save lives when it matters most.

Detect Interfering Transmissions

Reliable communication is critical at sea. When interference disrupts signals, **RDF systems** quickly detect and locate the source whether from faulty equipment**, unauthorized transmissions**, or environmental factors. By resolving issues fast, RDF ensures **safer**, more efficient **maritime operations**.



Main Features of DF Commander MK2

Scalable Solution for Geolocation and Direction Finding

The DF Commander MK2 offers a flexible and scalable approach to radio direction finding, tailored to meet user needs. From a single direction finder to an expansive nationwide geolocation network, the system can grow seamlessly with the addition of units and location servers. Configurable options include support for multiple frequency channels, customizable display modes, and integration with existing systems, ensuring adaptability for both local and regional maritime traffic control.

Remote Control and Monitoring

With DF Commander MK2, managing and monitoring RDF systems has never been easier. Its advanced remote access capabilities provide real-time visibility of system status, bearing data, triangulation results, and overall performance from any location. An integrated SNMP interface ensures smooth connectivity with external monitoring platforms, delivering enhanced oversight and reliability for vessel traffic services.

Visualizations

An intuitive interface allows operators to visualize bearing and cross-bearing results directly on electronic maps, simplifying situational assessment and enabling well-informed decision-making. The system supports integration with various map formats, such as OpenSeaMap, OpenStreet, OpenFlight, and OpenTopo, ensuring compatibility with user preferences and workflows.

Recording and Replay

DF Commander MK2 provides powerful recording and event review functionality for all direction-finding and geolocation results. Recorded data can be utilized for incident management, geolocation analysis, and training purposes. With Playback mode, users can visualize past events on maps, forward data to ATM training systems, and focus on specific time frames with adjustable replay speeds for detailed evaluations.

Integration and Compatibility

DF commander MK2 can be easily integrated into your existing maritime traffic management infrastructure. Built on the ASTERIX CAT205 open standard interface, the system ensures compatibility and vendor independence. RHOTHETA also supports the development of legacy protocols, allowing for straightforward replacement of outdated direction finders without disruption.

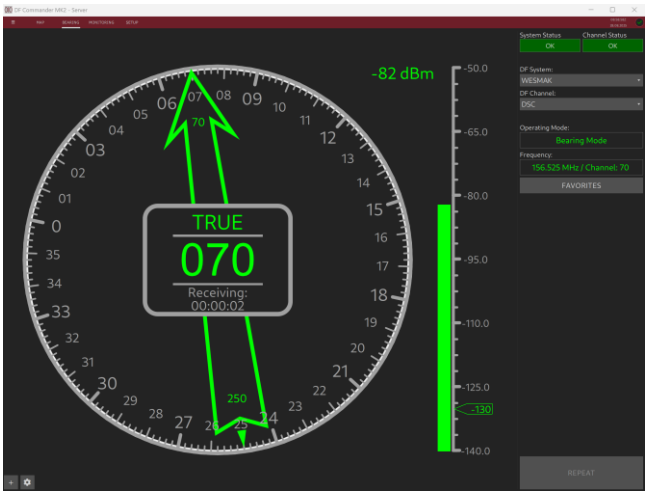
Configuration and Maintenance

The system features user-friendly configuration tools for quick setup and customization, tailored to meet specific operational requirements. With the ability to log all events for analysis and troubleshooting, alongside streamlined maintenance tools, remote access capabilities, and detailed diagnostics, DF Commander MK2 ensures optimal performance and minimizes downtime.

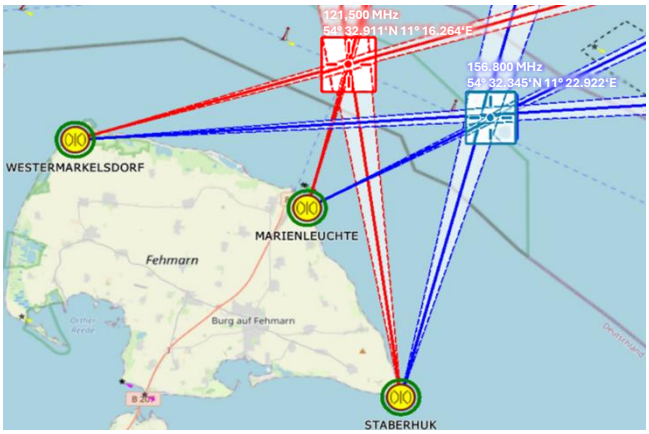
Safety and Security

Developed in compliance with IALA VTS Guidelines and IMO SOLAS regulations, DF Commander MK2 meets the highest standards of safety and reliability for vessel traffic service operations. Advanced security features safeguard system integrity and protect against unauthorized access, ensuring robust and secure performance in any maritime environment.

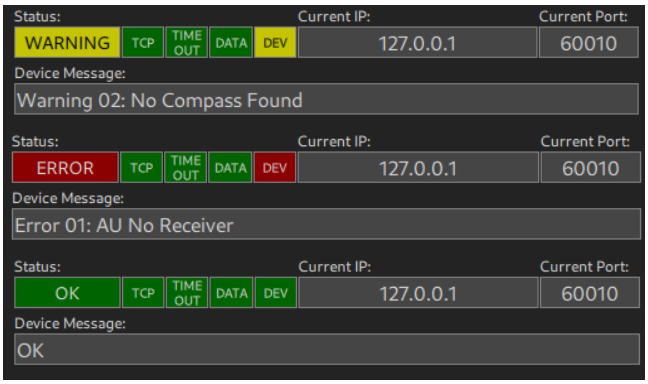
Bearing:



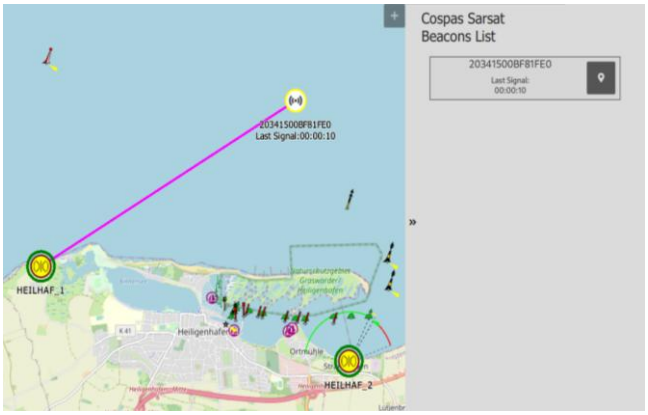
Triangulation:



Status:



COSPAS Data:





DF Commander MK2

The **DF Commander MK2** is a smart and **powerful software** for real-time vessel tracking and remote monitoring **of RDF systems**. With interactive maps, seamless integration with VTS platforms, and advanced diagnostics, it ensures **accurate positioning**, smooth operations, and **maximum efficiency**.

Designed with flexibility and scalability in mind, the application can manage single direction finders or expand into a high-availability countrywide geolocation network. Built for safety, security, and efficiency, the DF Commander MK2 adheres to ICAO Annex 10 and EUROCAE ED-153 standards, making it the ultimate solution for reliable, accurate, and user-friendly radio direction-finding operations.

Upgrade your VTS center with cutting-edge technology today!





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