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marFM

Spoken. Received. Transcribed.

Innovation for maritime radio communication

The mandatory VHF radio is a safety-critical device on board a ship. The very robust technology has proven itself over decades, but it also has its drawbacks.

The quality of transmitted messages varies significantly depending on the distance between sender and receiver as well as antenna height, and can be further reduced by prevailing weather conditions. Engine noise onboard coupled with multinational crews speaking in

different accents and dialects further complicates understanding the received messages.

Automatic speech recognition for VHF radio

To address these challenges, we at Fraunhofer CML have developed the maritime speech recognizer marFM, a complementary tool to the standard VHF radio. This tool supports radio operators in daily operations when communication problems occur and also by saving reaction time in critical situations.





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Illustration of marFM's main functionalities: call log and sender localization & identification

Easier VHF radio monitoring and faster emergency response

Imagine you are working in a Maritime Rescue Coordination center (MRCC) on land or as On-Scene Coordinator (OSC) at sea. Your task is to listen to the noisy VHF radio channel and coordinate rescue operations. You are in a stressful situation, you have to document incoming calls and dispatch rescue operations, and all you have at hand is a pen and paper.

Our solution marFM supports radio operators both on board and ashore with information about **WHO** sent **WHAT** and **WHEN** from **WHICH** position. marFM's speech recognition engine automatically converts maritime speech to text and its innovative algorithms locate and identify the sender.

Main Functionalities

Artificial Intelligence for maritime speech recognition

Our solution is specifically trained and optimized for the acoustic and linguistic challenges of maritime radio messages (low audio quality, multinational crews with different accents and dialects, use of SMCP, ship names etc.).

Textual call display

marFM automatically converts incoming calls into text. It's like having subtitles for FM radio.

Call log documentation

Scroll through the last calls to check if you missed any. In case of incidents, you can use the call documentation as evidence.

Sender localization and identification

In combination with radio direction finding, marFM detects from which vessel and position a call is most likely to originate.

Improve remote monitoring

Quick and simple assessment of the current and historic situational picture and thus forming an optimal basis for remote operations.

Standalone or integrated

marFM can have a custom user interface or can be integrated into your existing systems via APIs, installed on shore or as an offline tool on board. A broadband connection is not required for usage.

Further Information

Have we caught your interest?

Feel free to contact us and we will show marFM and the potentials for your company in a free demo.

Contact

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