

A dramatic photograph of a submarine on the surface of the ocean. The submarine is white with dark grey accents and is angled towards the left. The sun is setting in the background, creating a warm, orange glow that illuminates the clouds and the water. The sky is filled with dark, heavy clouds, and the water is dark with some white foam from the submarine's wake. The overall mood is serious and powerful.

The partner of choice for your VLF projects

VLF studies for system performance analysis

Our proprietary numerical computer simulation model can provide users with an interactive graphical environment to evaluate the communications performance of various VLF systems.

Our model was developed in Matlab, implemented in Simulink (running within Matlab) and validated using actual sea trials data.

How it works

- The model measures communication performance by measuring the character error rate for a given system configuration and signal to noise environment.
- Decoded characters are compared with the original characters transmitted and a record of the number of characters tested in a trial.
- The model logs the number of errors detected and the associated character error rate.
- Users can adjust various parameters to conduct parameter sensitivity assessments. Examples of adjustable parameters include signal timing delays and atmospheric noise, introduced via a Gaussian Noise model.

The partner of choice for your VLF projects

Consultancy services based on significant technical understanding of the overall VLF systems.

In addition to the provision of critical technical guidance, subject matter advice and Design Authority advice on the overall VLF system, we specialise in picking up communications issues and constraints which might not be immediately apparent to the design team.

How we can contribute

- As a VLF communications advisor supporting the programme team.
- By providing critical technical guidance during the project design and testing phases.
- By providing modulators, demodulators and inter-connectivity equipment to meet specific programme requirements.
- By supporting experimentation and sea trials activities that would be needed to demonstrate performance of the system, for example by providing:
 - Guidance on test plans.
 - VLF communications performance measurements.
 - Provision of specialist test equipment.
 - Analysis of communications performance.

