APPS

Acoustic Performance Prediction System

When sound propagates underwater it is exposed to numerous and complex phenomena as reflection, scattering and absorption due to the variable nature of sea. These phenomena modify the sound propagation paths and the transmitted energy.

Realistic sound propagation predictions.

APPS evaluates the sound propagation and the characteristics of different acoustic systems in a specific underwater environment.

Several uses.

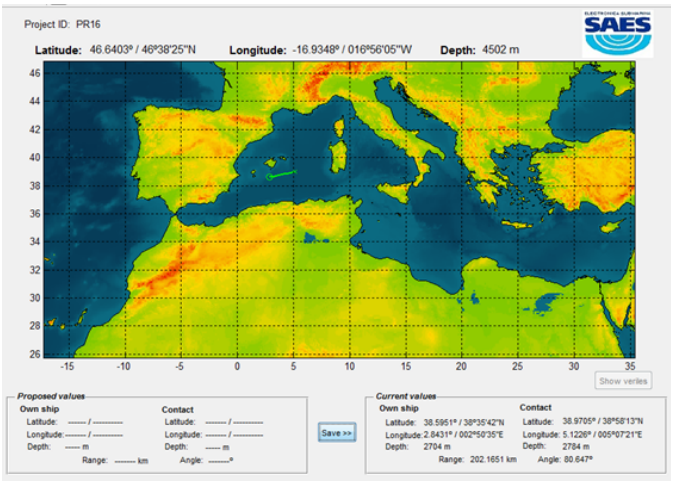
The system is used to obtain realistic sound-propagation predictions for commercial sonars, scientific studies, R&D projects and educational tasks.

Internationally Validated

Internationally validated propagation models and global databases allow the acoustic device performance evaluation in any sea around the world.

Improve the acoustic sensor performance

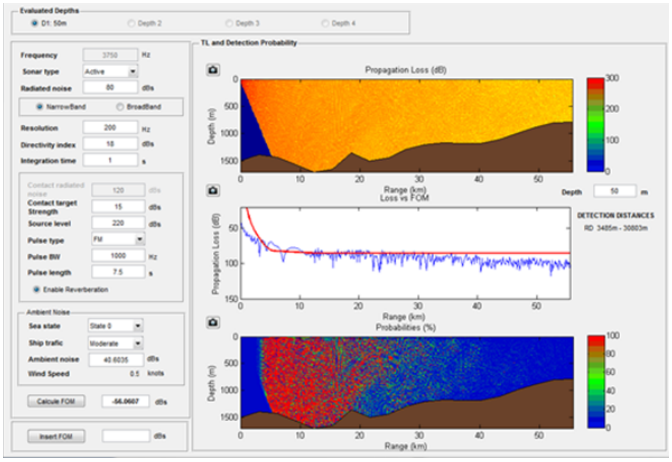
- Ensure efficiency of ambient noise measurements, as those used for noise maps.
- Increase the navigation and fishing sonars efectiveness.
- More accurate detection range of sensors for cetacean/biological detection.
- Also applicable to vessel traffic control and oil/gas pipeline monitoring sensors.
- Accurate calculation of coverage area of communication and positioning systems used by UUVs, ROVs and Divers.



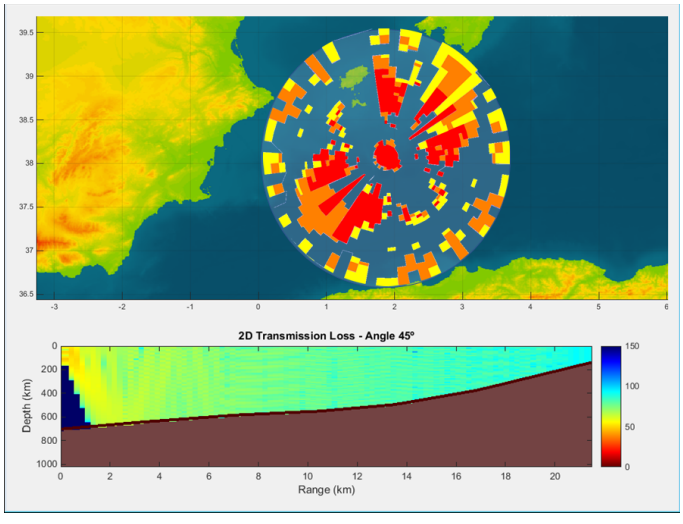
Map display for selecting the area of calculation.

Main Features

- Validated propagation models for low and high frequencies.
- Reverberation calculations for active sonar.
- Ambient Noise based on sea state and ship traffic.
- Configuration of environment and acoustic sensor characteristics.
- Configuration of sensor device parameters in order to achieve the better couverage (depth, bandwidth and tilt angles).
- Global Databases included:
  - Global Bathymetry.
  - Global Sound Velocity Profile (SVP).
- Empty user database for saving own SVPs.
- 2D displays for configuration and result evaluations.
- 3D calculations providing 360º prediction for every depth.
- Compatible with Windows and Linux operative systems.



2D display showing calculatons results.



Results of 3D calculation for a selected depth shown over map display.

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