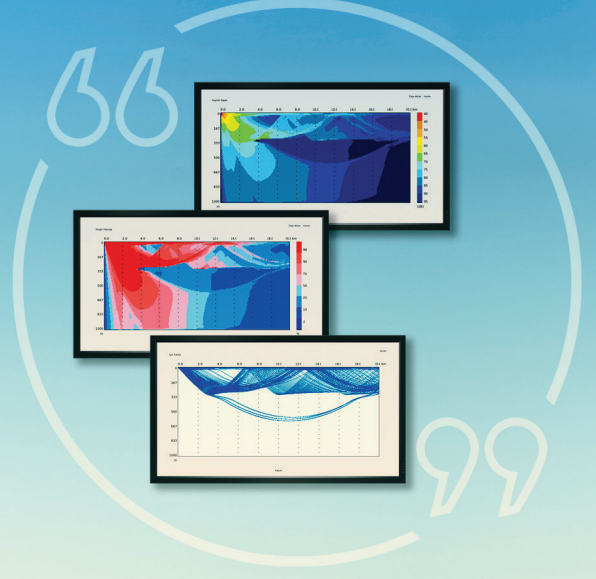# SORTAM

www.kocsavunma.com.tr

Koç

Koç Bilgi ve Savunma Teknolojileri A.Ş.

Underwater Environment Model (SORTAM) is a software tool that models the progression of sounds emitted from acoustic source with the help of the propagation models underwater.

Koc Information and Defence Technologies Inc. (KBS) provides a software tool for analysing underwater acoustic propagation.

- Underwater Environment Model (SORTAM) is a software tool that models the progression of sounds emitted from acoustic source with the help of the propagation models underwater.

- SORTAM is an independent, robust, user-friendly and fast acoustic simulator.

- SORTAM offers user friendly Graphical User Interface (GUIs) for configuring and acoustic model with parametric containers and graphic tools.

- SORTAM shows results of the propagation model with graphical outputs.
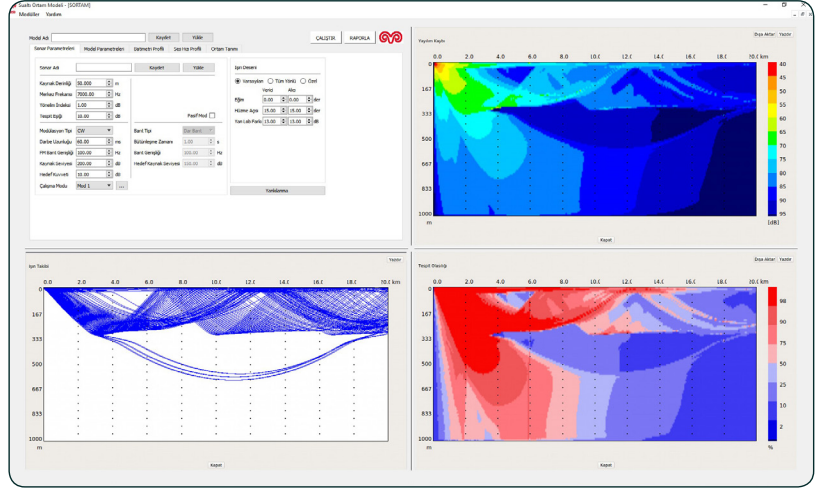
BASIC COMPETENCES

- The area processed in SORTAM consists of an acoustic environment with sound speed depending on the distance and depth.
- The BELLHOP model was chosen as an acoustic propagation model based on the ray theory in the calculation of propagation loss.
- The resulting propagation loss and ambient noise are used to calculate the signal to noise ratio (SNR) of the acoustic model as an output of the model.

SYSTEM FEATURES

- Large parameter set containing the most frequently changed parameters for a SONAR.
- Creation mechanism of scenario field
- Ability to process profiles of multiple sound speed depending on the horizontal distance
- Ability to define the marine condition on the Beaufort scale depending on the distance.
- Ability to define bottom and surface structure depending on the field distance

OUTPUTS OF THE SORTAM

- The appearance of the emission losses that is calculated by BELLHOP in the defined underwater area, depending on the distance and the environment as a result of the operation of the ray tracking model.
- Progression of the rays at the certain angles from an acoustic source
- The signal level of the pulse from the object in the field to the receiver.
- Possible detection percentages depend on the calculated SNR value and the Detection Threshold of the Sonar.
- Reverberation and noise values from the sea surface, sea bottom and water volume

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