C4i communication

EXPERIENCE THE DIFFERENCE
YOUR SECURITY & SAFETY PRODUCTS

GENERIC SONAR SIMULATOR

Today's sonar systems are sophisticated and complex and therefore require long hours of training and practice. The learning process is long and costly requiring long hours both in the classroom and at sea. It is a well-known fact that even the most advanced sonar system is only as good as the quality of its operator.

For this reason, C4i has developed its Generic Sonar Simulator (GSS), which is ideal for rapid and comprehensive training of ASW, submarine, and mine detection sonar operators.

This advanced, low cost, PC-based training simulator is designed for all levels of sonar operators from beginners to the most experienced and highly skilled.

The simulator includes all aspects of sonar operation, with emphasis on training in:

- weak target detection in the presence of various noises and reverberations
- torpedo detection
- audio listening
- classification

The GSS is designed for ease-of-use, simulation accuracy, and simplified instruction. The system offers a wide range of features and tools that allow trainees to quickly enhance their sonar operation skills.

C4i's Generic Sonar Simulator's flexible and robust software design and interface support easy adaption to any type of sonar system including:

- Active/Passive Hull Mounted Sonar (HMS)
- Variable Depth Sonar (VDS)
- Active Towed Array Sonar (ATAS)
- Dipping Sonar (DS)
- Passive Towed Array
- Passive Medium Frequency Sonar
- Flank/Towed Array Sonar
- Passive Ranging Sonar (PRS)
- Intercept Sonar
- Mine Detection Sonar

C4i's Generic Sonar Simulator is based on:

- Open Architecture design
- Advanced Signal Processing
- Tailored realistic Human Machine Interface
- COTS hardware (mainly PC computers and LAN networks)
- Excellent Cost-Performance ratio
- Low Life Cycle Cost

And provides high-fidelity simulation and operation of any sonar system.

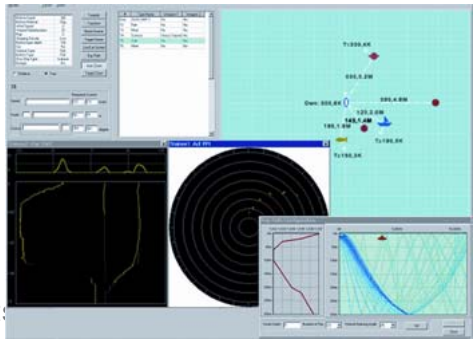
Features

The GSS includes multiple target types such as:

- Surface ships
- Submarines
- Mines
- Torpedoes
- Underwater life e.g. Schools of fish
- Own Ship (surface ship or submarine)

All relevant training parameters are stored in the GSS database, including:

- Scenarios
- Own ship and target's acoustic parameters
- Environment and sea acoustic parameters
- Sound Velocity Profile (SVP)



New exercises can be easily created by the system and existing exercises can be retrieved from the GSS Exercise Library.

Simulated acoustic signals include:

- active target echo
- target BB and NB radiated noise (including DEMON and transient
- transmissions of active sonar onboard targets
- ambient noise
- reverberations
- self noise including flow noise.

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