SIMSON
SIMSON is a simulation tool, designed to easily produce sonar images.

SONAR SENSOR SIMULATION TOOL:
SIMSON is an underwater acoustic imagery simulator, which integrates the definition of 3D terrain, acoustic propagation, and side scan or sector scan imaging sonars.

Simulated images are produced at very high speed, thanks to a full GPU implementation. The user friendly GUI enables the user to easily operate the software.
Fast simulation of sonar images for civilian and military applications

Images composed of seabed and objects (mines, wrecks...)

APPLICATIONS
- Underwater military applications
- Training tool
- Help to design various algorithms thanks to simulation:
  - Classification and data fusion
  - Automatic Target Recognition
  - Characterization of underwater objects
  - Target detection in various environments
- Sensor design tool, with the ability to predict future systems performances

FEATURES
- 3D seabed definition
- Materials definition
- Multipath propagation based on ray tracing algorithms

FEATURES
- Full GPU computation based on the CUDA toolkit and NVIDIA Optix ray tracer
- Full featured 3D GUI tools to prepare the simulation, run it, and visualize the results
- Sector scan and side scan imaging sonars
- Simulation controlled by a comprehensive set of options (normal maps, multipath propagation, speckle, transmission loss, time varying gain, beam pattern / directivity, noise level)

PARTNER & SUPPORTS:

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