Software Overview

ProteusDS is a full featured dynamic analysis software capable of simulating vessels, flexible structures, lines and technologies in harsh marine environments. It is modern, customizable, validated, and is continually improved based on the needs of our growing user base. It combines a robust solver with advanced 3D graphics and a modern user interface.

Employed by naval architects, marine engineers, offshore engineers, oceanographers and many other users, ProteusDS uses advanced hydrodynamic, finite-element, current, wind, wave and mechanism models to achieve accurate results.

Whether driven by certification or the desire to create elegant solutions, assessing system dynamics is all about reducing risk. ProteusDS has become an invaluable tool in the marine industry. It is uniquely suited to test technologies to understand how they will react under various, wind, wave and current conditions.

To request a demo visit www.proteusds.com

Key Features

- **Finite Element**: cubic finite-element line & net models
- **Mechanisms**: constrain body motions with hinges and joints
- **Waves**: regular, irregular and custom wave spectra
- **Current**: time and spatially varying current including turbulence
- **Wind**: explore wind loading
- **Hydrodynamics**: flexible hydrodynamic modeling
- **Control**: PID and custom control systems
- **Seabed**: seafloor interaction and bathymetry
- **Contact**: contact and impact between bodies
- **Customize**: application programmer interface
AQUACULTURE & FISHERIES
NET CAGE ANALYSIS, MOORINGS

DEFENCE
LAUNCH & RECOVERY, TOWED ARRAYS, SUBMARINES

MARINE RENEWABLE ENERGY
WAVE & TIDAL ENERGY, FLOATING WIND, MARINE OPERATIONS

NAVAL ARCHITECTURE
SEAKEEPING, TOWING, MANEUVERING, WINCHES, PILES

OCEAN TECHNOLOGY
BUOYS, MOORINGS, OCEANOGRAPHY, TOWED BODIES, ROVs, AUVs

OFFSHORE & SUBSEA
MOORINGS, PIPELINES, RISERS, FLOATING STRUCTURES, INSTALLATION ANALYSIS

Why you should choose ProteusDS.

Intuitive Interface
An easy to use interface allows for rapid model development and handles both complex and simple models equally.

Powerful 3D Graphics
Leading 3D visualization capabilities and a wealth of viewing options gives insight into numerical modeling results.

Technically Advanced
Advanced algorithms from mechanisms, to cubic finite-element line models, to hydrodynamics and so much more.

Validated
Rigorously tested against hundreds of benchmark cases to ensure new and existing feature work as expected.

Supported
Supported by a committed group of developers and power users that are actively adding new capabilities.

Documented
Extensive documentation and easy to follow tutorials make training straight-forward.

Value
A flexible and economical annual subscription license makes it easy to try for your next project.

Technical features
Irregular and regular wave models
Spectral wind models
Advanced mechanism modeling (cranes, WECs)
Finite-element cable model (bending, torsional, axial)
Finite-element net models and net shielding (fish farms)
6 DOF rigid body model (towed bodies, ships, buoys)
3 DOF point mass model (floats, anchors)
Nonlinear and linear seabed contact model
Custom bathymetry import
Spatially and temporally varying current

Users
Naval architects & marine engineers
Oceanographers
Ocean engineers
Mechanical engineers
University researchers