

Safer Shipping | Smarter Ports



# Ship Simulation

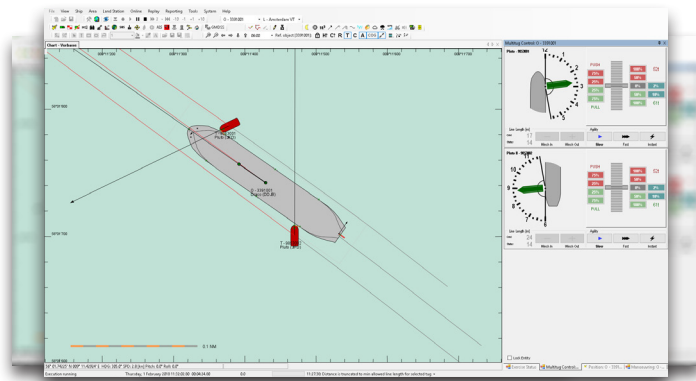
Horizontal and Vertical Assessment for Ports and Waterways

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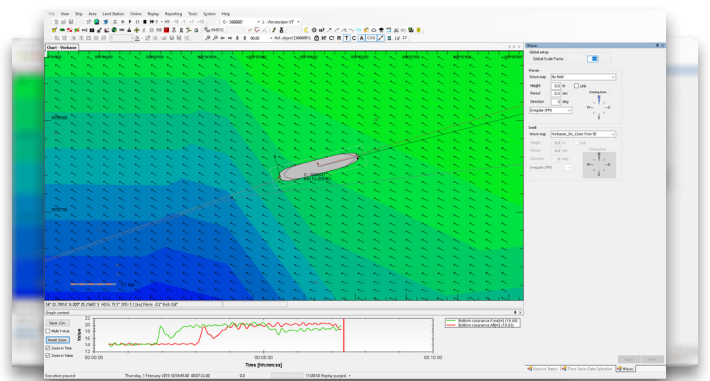
# Ship Simulation

For future port expansion or evolving operations, combine the power of the Simflex4 FastTime simulator with DUKC® technology to provide the total channel design and dredge optimisation package.

Integrate DUKC® with full bridge simulators to provide the most realistic simulation experience. Consider whole of port scenarios using the Dynamic Port Capacity Model (DPCM®).



Use OMC's proven environment and hydrodynamic models to ensure accuracy in simulations.



Test multiple manoeuvre combinations quickly with the best modelling available.



**World-leading expertise in horizontal and vertical assessment for ports and waterways.**



### CHANNEL DESIGN

Optimise the channel design to accommodate the safe manoeuvring of longer vessels. Minimise dredging costs with DUKC® dredge optimisation.



### LARGER VESSELS

Test the manoeuvring and tug requirements of new vessel classes well before they arrive at your port. Develop Port Master Plans with confidence by ensuring your port can accept the next generation of vessels.



### ASSESSMENT OF WIND, CURRENT AND WAVES

Develop and validate the rules for safe conditions for vessels moving in your port. Combine advancement of hydrodynamic port scale models and detailed environmental data analysis for a comprehensive understanding of operational risks and limit.



### NEW PILOTING MANOEUVRES

Work with OMC's in-house pilotage experts to evaluate manoeuvres quickly and safely for a fraction of the cost of a Full Bridge Simulator. Go into the simulator having already defined the critical scenarios for evaluation.



### PORT INFRASTRUCTURE DEVELOPMENT

Help determine the placement and orientation of new port infrastructure to ensure safe water side operations. Combine with advanced hydrodynamic modelling to ensure physical changes to the port environment are accounted for.



### TUG REQUIREMENTS

Assess the number of tugs required, and their optimum positioning, for any vessel, manoeuvre and environmental condition. Plan the purchase and lease of new tugs with the knowledge in hand to make the best-informed decision.

# DELIVERING TOTAL PORT SOLUTIONS



DUKC® has assisted more than **120 port facilities, terminals, and waterways** to safely and efficiently conduct **175,000+ deep draft transits**. Utilising state-of-the-art modelling techniques, DUKC® is the world's most comprehensive, and extensively validated, operational UKC management system.

Drawing on a team of engineers, environmental scientists, naval architects, and master mariners, OMC's waterways design expertise is built on a 25 year history of leading the development and implementation of operational UKC technology (Vertical Dimension).

Our unique technology has been extended to include the Horizontal Dimension, port operations and statistical modelling techniques. This enables us to provide an even more precise cost benefit analysis for our clients.

Our optimisation methods enable dredging to be targeted, ensuring maximum return on investment and minimum environmental impact.

## OMC's additional capabilities:

- Horizontal and Vertical Channel Design
- MetOcean Data Measurement and Forecasting
- Capital and Maintenance Dredging Optimisation
- Channel Siltation and Maintenance
- Dynamic Port Capacity Modelling
- Ship Motion Analysis
- Mooring Design and Berth Warning Systems
- Ship Simulation

