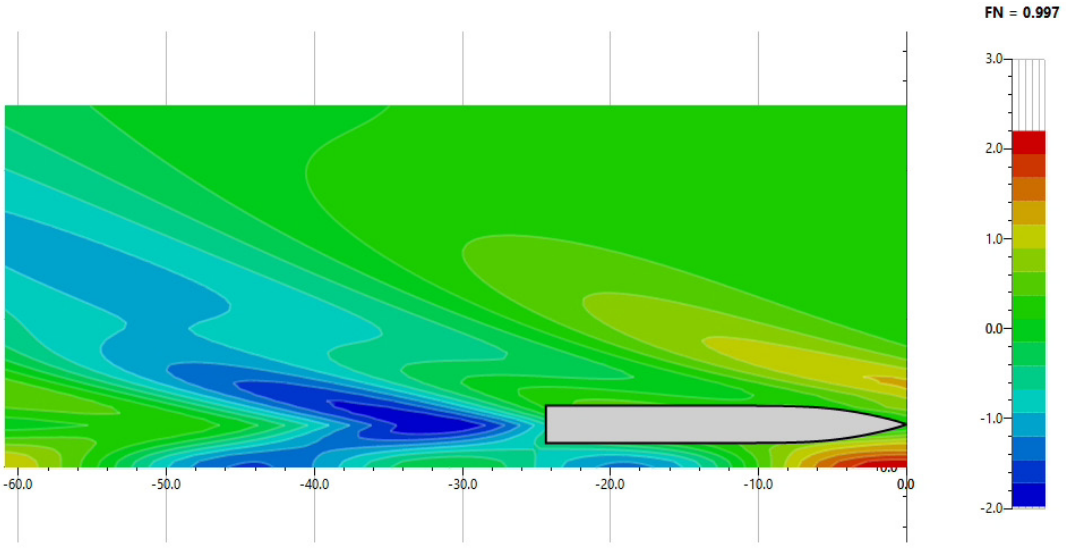
HydroComp, Inc.

September 23, 2019

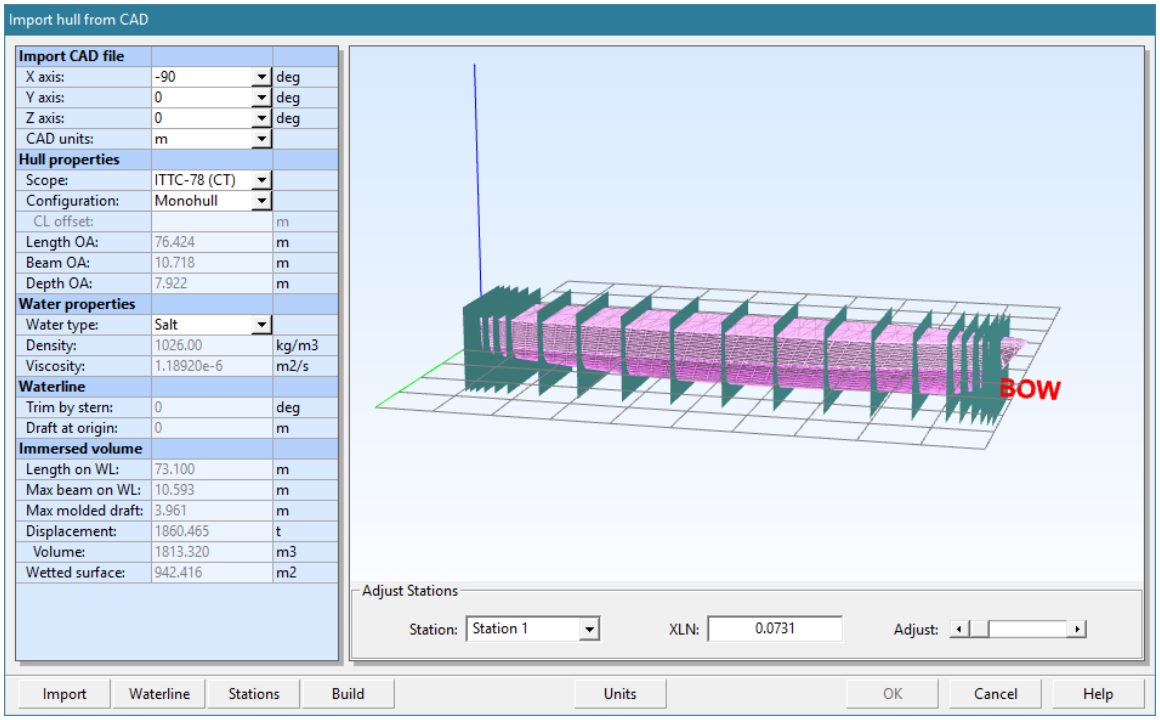
New! HydroComp NavCad Software Interfaces With Orca3D

HydroComp, Inc. (Durham NH) and Orca3D LLC (Annapolis MD) are pleased to announce a new naval architectural tool-chain connection between Orca3D (a Rhino3D plug-in for naval architectural design) and NavCad® (HydroComp's "gold standard" tool for hydrodynamic and propulsion system simulation). The new capability accelerates a ship designer's workflow and allows users of both tools the ability to navigate the design spiral more efficiently and effectively. At the click of a menu selection in Orca3D, naval architects can evaluate their design using the complete capabilities of NavCad to reach beyond hull form analysis alone or a simplified estimate of power.

Once a hull form design has been developed, Orca3D can launch NavCad with relevant hull data and defined performance. The designer can then conduct a complete evaluation of the Vessel-Propulsor-Drive system, including hull form and other drag components, optimum propulsor characteristics, and equilibrium propulsion system metrics, such as efficiency, power, fuel consumption, range, even greenhouse gas emissions. The Premium Edition of NavCad further provides multi-mode evaluation of a full voyage or mission duty-profile, scripting for batch calculations, and the "Analytical Distributed Volume Method" for resistance prediction. The ADVM method is particularly valuable within the Orca3D-NavCad tool-chain, as it offers not only a fully computational prediction of wave-making and total resistance properties, but also novel design guidance to identify which parts of the hull are contributing most to resistance (such as shape inflections or "shoulders" in the sectional area curve).



Key to the effectiveness of this tool-chain connection is the new "hull CAD import" feature in NavCad 2019. This feature automates the extraction of the hull form information needed by NavCad, from its principal parameters to the complete distribution of the immersed volume. Further, user efficiency and data fidelity is enhanced by ensuring that the proper project data is provided to NavCad, and by removing any possibility of manual entry errors.



This new tool-chain connection is just the latest in a 20+ year history of collaboration among the members of the Orca3D and HydroComp teams - from IMSA, to speed-power module development, to this new “best-of-breed” connection for naval architects.

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