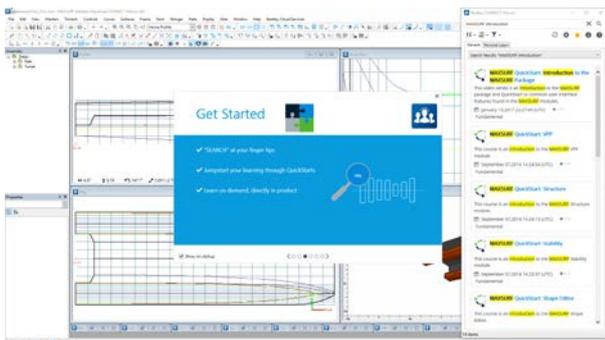# What's New in MAXSURF CONNECT Edition v21:10

CONNECT Advisor - access in-application help

CONNECT Advisor provides direct access to help from a variety of sources. You can search multiple locations for help on any topic relating to the use of MAXSURF applications. CONNECT Advisor will automatically search:

- Bentley LEARN
- Bentley Offshore Community forum
- Bentley Offshore YouTube channel
- Local Product help documentation

Filters can be applied on various criteria to provide access to the most relevant and up-to-date content.
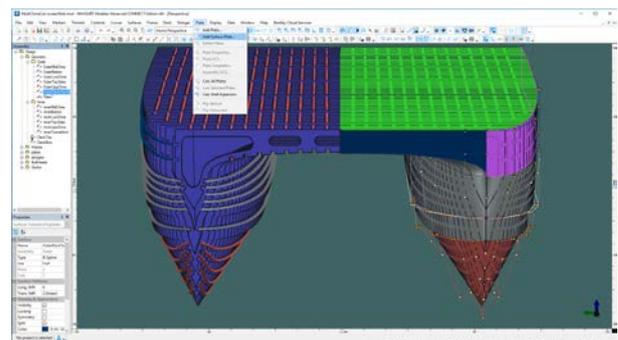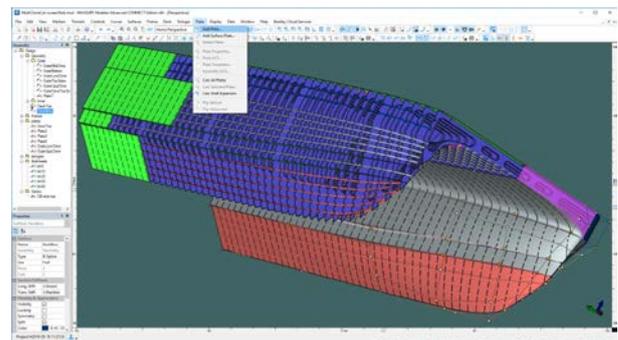

MAXSURF Modeler - hull-form and hull structure modeling in a single application

Improve design workflow with MAXSURF's comprehensive tools allowing users to go from initial hull-form design through to layout of the primary structural parts in a single application. The primary structure design functionality that was previously in the separate MAXSURF Structure application is integrated into MAXSURF Modeler. The primary structure (frames, decks, plates and stiffeners) which depend on the hull geometry can now all be modeled in the same application as the hull-form.

This is the third such merge of functionality into the MAXSURF Modeler application. Recent releases incorporated the NURBS surface fitting and geometry export tools of the MAXSURF Fitting and Link applications into MAXSURF Modeler.

NOTE: Applies to MAXSURF Advanced and Enterprise packages only.

MAXSURF Modeler - enhanced NURB surface meshing tools for CFD and FE analysis
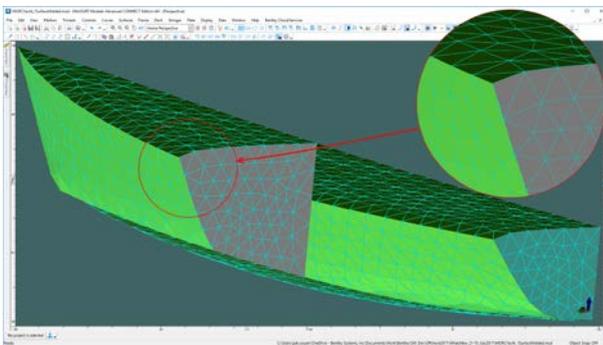
Produce coherent surface meshes for CFD and FE analysis with the comprehensive range of surface meshing tools in MAXSURF Modeler. There are three new features which assist the production of coherent surface meshes for CFD and FE analysis:

- Welding to ensure node continuity where meshes intersect;
- Joining to ensure node continuity where meshes touch along a common edge; and
- Remeshing selected areas of a mesh at a different triangle density

The mesh welding and joining features are particularly useful for producing a coherent surface mesh when the model is made up of

several independent NURBS surfaces. In the image below, the deck mesh (dark green) shares a common edge with the main hull mesh (light green), both surfaces share common edges with the transom mesh (teal). The new mesh "joining" feature has been used to ensure that the meshes share common nodes along their common boundaries; thus ensuring, a watertight mesh for CFD analysis. The internal bulkhead mesh (grey) has been "welded" to the deck and hull meshes ensuring node continuity which would be required for a FEA model, for example.
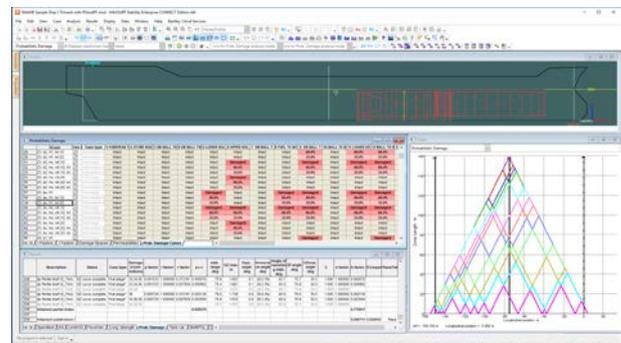

MAXSURF Modeler also contains comprehensive meshing tools for generating CFD meshes on the exterior hull surface. On-going development will result in additional capability.

MAXSURF Stability – enhanced SOLAS 2009 probabilistic damage analysis

Perform probabilistic damage analysis with enhanced intermediate stages of flooding functionality capability.

Improvements have been made to the way that intermediate stages of flooding are dealt with in MAXSURF Stability's probabilistic damage analysis. Any number of intermediate stages with partial flooding levels can be specified for each damage scenario (in addition to the final stage which is automatically generated). This can be used to simulate partial cross-flooding as well as intermediate, partial flooding when instantaneous flooding of the whole space cannot be assumed. The damage scenarios are automatically combined depending on the number of adjacent zones to be investigated as well as the different vertical and transverse extents of damage that must be considered. The intermediate survivability factors for all intermediate cases are assessed automatically and the worst condition automatically selected.

Download Instructions

Current and past MAXSURF releases can be downloaded from Bentley Cloud Services at: http://connect.bentley.com

After signing into CONNECTION Center, select Software Downloads under My Support, towards the bottom of the page. Once on the Software Fulfillment page, MAXSURF installers can be located by performing a search on "MAXSURF", or by selecting Brand -> MAXSURF.

Choose "All Downloads" displayed below MAXSURF in the list of products on the right

Download the latest MAXSURF release by clicking on the green arrow to the right of the name "MAXSURF CONNECT Edition 64-bit"

Important installation requirements and notices are found here in the ReadMe.