Questions and Answers from the ExpressMarine Webinar April 2nd 2020

Q: Is it possible to use this tool for a submarine?

A: Yes, certainly. It can be used for any hull form and vessel type

Q: Is there a way to filter out which stock we want to show so the user can only select certain stock?

A: At present no, but this has now been added to the list of enhancement for future version.

Q: Can the model be cut up into hull-blocks and modules?

A: You can define blocks and get the weight and CG for each block calculated. The corresponding ExpressMarine parts can also be exported to ShipWeight according to the project's WBS and to different Units in ShipConstructor. To "physically" cut the model up into blocks you may save a copy to the model and use Rhino3D functions to cut it. You can also use Rhino's clipping planes to view just the block.

Q: How are skewed bulkheads handled, as I saw the bulkhead creation automatically put them in either a transverse or longitudinal group?

A: Skewed bulkheads can be created (you can pick any line on a GA or select an existing Rhino surface object), but there is no dedicated group for them (maybe we should add that), they will either be put in the transverse or longitudinal group depending on their "main" direction.

Q: Can ShipConstructor endcuts also be applied to stiffeners?

A: Unfortunately ExpressMarine does not deal with or export endcuts at this point. We intend to add this in a future release.

Q: Can it be use with different materials like composite materials?

A: Yes, the user can define a material library with density information to be used in ExpressMarine. The correct thickness will be applied upon exporting to ShipConstructor

Q: Does the automatic updating process handle locked items?

A: Locked items are never affected by automatic updates, however we are currently implementing an option for this to be included in next release.

Q: *What if we use different thickness in shell, decks or frames?*

A: In this case you can apply seams to handle this situation. With regards to plates, inserts, etc. you may also define separate parts each using its own stock

Q: *Can you also include deck cambered decks?*

A: Yes, cambered decks would be handled as custom surfaces. You can assign thickness to it and you can run stiffeners along it just as you would a flat deck.

Q: *Can the created model be used outside the ExpressMarine space for further detailing in Rhino? Will the items get grouped by layer and have names assigned to it?*

A: The ExpresMarine model is made of native Rhino geometrical entites plus special ExpressMarine data and relationships. Therefire, yes indeed you may further detail ExpressMarine the model and move parts to other layers using Rhino commands but in this case the model will be disconnected from Expressmarine and ExpressMarine properties will be lost. The wish to place different ExpressMarine objects on dedicated layers has been expressed before and is noted.

Q: *Would it be possible to transfer the model to a 3d solid model without transferring compulsory to ShipConstructor environment?*

A: You can use all generic Rhino3D exports available to transfer the 3D model. Rhino3D supports a wide range of file formats for export. Having said that, the ExpressMarine model s made of surface objects, with zero thickness.

Q: *Is it at all possible to have any internal clash check for structural items (for example, bulkhead stiffeners vs stringers)?*

A: This functionality is currently under development and will be implemented in future release.

Q: *What are the export options to FEA software (e.g. ANSYS)?*

A: The ExpressMarine elements are native Rhino surfaces. If your FE software can read in Rhino or iges or dwg, then you can export the ExpressMarine model. Some users have reported very good results in exporting the Rhino model to AutoCAD for FE analysis with AutoFEM, to MAESTRO, etc. There are some FE plugs-in for Rhino, too., if you use these there is no need to export anything.

Q: Is it possible to use this for catamarans?

A: Yes, certainly. It can be used for any hull form and vessel type.

Q: Is it possible to model the hull of a barge or a railway coach?

A: Yes, ExpressMarine would be an excellent tool for either of those applications.

Q: Are the parts created in ExpressMarine solids or are they 3D Surfaces?

A: They are surfaces, with a thickness property and throw direction.

Q: To get into ShipConstructor - is that an additional cost module or is that included?

A: There is no additional cost on the ExpressMarine side. SSI indicate that on the ShipConstructor side your ShipConstructor project has to be EnterprisePlatform enabled, EP Client is enough. SSI tell us they will will release a form statement in this matter soon. Please contact SSI or your ShipConstructor dealer (Innovmarine in Canada, NDAR in EMEA, etc.) for details.

Q: I'm interested in how the data, exported from ExpressMarine, looks when opening the model in ShipConstructor.

A: It will look as if they were created from scratch in ShipConstructor from the beginning, with properties and objects stored in the ShipConstructor SQL database.

Q: How should the GA or 2D help drawings be defined to be read correctly?

A: Any format that Rhino3D can import will be fine. This includes dxf, dwg, etc. And, if you want to continue working on the GA in a separate file you may also use Rhino's WorkSession (found in the File pull-down menu, similar to AutoCAD's X-Ref). Conversely, you can also see the model in your separate Rhino session where you are working on the GA. In this case make sure you are working on the correct planes so you can use the ExpressMarine structure model as an exact reference. Also, please note that you can also use ExpressMarine without 2D drawings, it is helpful but not mandatory.

Q: If I want to export the model to a FEM software, does the model have the joint between those elements, stiffeners and decks?

A: Rhino does not export a closed mesh model. Closing of the mesh model will have to be performed by the FE application you will use.

Q: Do you offer a free trial version?

A: Yes, at www.expressmarine3d.com.

Q: How does ExpressMarine deal with thickness directions of plates, and placement of stiffeners on these plates.

A: A default throw-direction point is inserted at X=Lpp/2, Y=0, Z=0.05, but the user can freely define a different throw-point.

Q: How about changes? From huge (change of hull breadth) to small (change of stiffener type or spacing)?

A: ExpressMarine handles changes very well. You can make changes and update using the Update Panel at the lower part of the global area to the right in the ExpressMarine window. Changes to the hull shape, for example, were not shown in the webinar for lack f time, and will be subject of future webinars and videos.

Q: Is it possible to analyze ship stabilitiy consider all this volume?

A: Yes, for example using Orca3D, the naval architecture plug-in for Rhino

Q: Do you see any issue with attaching a wing and tails to the fuselage? How about keel, rudders and stabillizer lifting surfaces?

A: Lifting surfaces can be modelled using the Orca3D Foil Assistant, their structure can the n be modelled using Express Marine

Q: How about marklines for non-catalog stiffeners...like a long bhd stopping at a transv bhd?

A: Plate-Plate marklines are currently not generated by Experssmarine. They are, however, high on the with list for ShipConstructor development, you may expect to see that feature used to mark places sometime soon in Nest and MarineDrafting.

Q: Are there any other level of detail such as corner treatment, end treatment bracket and so on in the parametric?

A: Tertiary structural details like brackets can indeed be defined in Expressmarine using the tools currently available for primary and secondary structure modelling, more or less quickly depending on the exact geometry. Mouse holes, corner treatments, etc. are not supported, yet.

Q: How would pillars be added?

A: Pillars, and any other structural element currently not modelled explicitly by Expressmarine can be modelled as Rhino objects and added to the ExpressMarine model as Custom Groups.