

GridPro v7.0

List of new features:

1. GridPro API with python language support has been released.
2. Edges can be automatically created while creating the corners using 'With Edges' mode.
3. New wrap option called 'Surface by Surface' is implemented. Given a group of external faces, it wraps based on the surface assignments.
4. New wrap option called 'Internal + External' is implemented. You can wrap both internal and external faces of a topology together.
5. Wrap functionality provides an option to project the wrapped layer onto the current surface.
6. Copy dialog provides an option to directly copy the given faces to the current surface.
7. Copy+Rotate can now automatically build the core of the topology while rotating a group of 2d faces.
8. New copy option called 'Copy using reference' can copy the given group of faces along the centerline of a surface or along a given linear set of corners.
9. Align→Surface can project the assigned corners to its surface using the surface id/group as input. It can also be projected and offset by a certain distance.
10. Align→Grid can project the given group of corners w.r.t to the grid blocks and offset by a distance.
11. Hole topology can automatically split the blocks longitudinally or bi-directionally for a given surface group.
12. Hole topology provides a command line option to replace the planar tria surfaces with planes if the intersection of adjacent surfaces are not complete.
13. New way of assigning faces to a surface is implemented under 'Generic' for ease of use.
14. Grid for the given topology faces/blocks can be previewed in Topology panel. The grid preview would be rigid without any smoothing.
15. Grid can be translated, rotated and scaled from this version through UI.
16. New shortcut to change the topology density from the grid panel is implemented under the right click grid blocks.

17. Quality dialog box provides option to group the corresponding blocks/faces of volume and surface folds.
18. First cell spacing of an external grid sheet can be calculated using it's surface id through Quality dialog box.
19. Periodicity of the grid loaded in the UI can be evaluated in quality dialog box.
20. New Algorithm (shortest path) is implemented for tracing the feature nodes of a surface.
21. Split and load the surfaces into the UI with a click of a button.
22. Save all the split surfaces with a click of a button.
23. Save and load all the split surfaces with a click of a button.
24. Error corner group groups all the invalid faces/blocks of the topology.
25. V-Fold corner group groups all the topology faces of the volume folds in the given grid.
26. S-Fold corner group groups all the topology faces of the surface folds in the given grid.
27. Warning corner group groups the corners/edges/faces/blocks of the topology which are reported to have quality issues by the Validity button.
28. Bad blocks corner group groups the blocks which are not positioned properly.
29. Unassigned surfaces can be grouped under 'Unassign' listed in the drop down list.
30. Transparency value can be set for Preview button.
31. Workplane clip ratio can be set via settings dialog box.
32. Redo can be done for the most recent state which are not listed as operations.
33. Log files can be accessed from the UI using Log button located at the right side of the status bar.
34. Support for Ellipsys & Eilmer format.
35. New basic, medium and advanced tutorials are created and are accessible from UI.
36. New videos are added to our YouTube channel, "[GridPro Meshing](#)".

List of functions whose capabilities are improved/modified:

1. Grid sheet and block colors are updated.
2. Section names are added for the global dock.
3. Active and inactive surfaces are renamed to visible and hidden surfaces.
4. Split→Curve and Trim are renamed to Sketching and Selection.
5. Surface labels is displayed in the status bar next to the surface id.

6. Euler and Navier stokes under schedule dialog box are renamed to comply and ignore.
7. New checks are added to validity button.
8. Split button layout is improved with new icons and work flow.
9. Tube can be created using linear surface and it can retain previously created tube names.
10. Load only once functionality is improved with new checks.
11. New icon is added for span out blocks.
12. Insert button layout is modified.
13. Propagation mode from Insert dialog box is moved to Groups section.
14. Backup group order is modified after operations like wrap/copy etc.
15. Corner groups are updated with newly created corners after copy+rotate.
16. Parallel and perpendicular options under Move button are moved to GL.
17. Align button layout is modified and updated with new projection methods.
18. Hole topology block orientation algorithm is improved.
19. Validity button provides information on block & cell counts.
20. Quality related warning messages are updated with images for better understanding.
21. Mismatch blocks can be fixed using fix button in quality dialog box.
22. Quality button layout is modified and updated with new features.
23. Bad cells/folds are displayed without loading a new grid.
24. Extconn/mirror grid functionality is improved with new algorithms.
25. Grid block info while probing is updated with no. of quad information.
26. License manager is improved with new options to kill a previously running instance.
27. Feedback messages are updated for few functions.

Bug fixes:

1. Fixed a bug in center of rotation where it fails to pick correctly in RHEL machines.
2. Fixed a bug in save corner group where it saves even if an empty corner group is provided.
3. Fixed a bug in validity button where it fails to report wrong periodic pairs for wedge shaped cases.

4. Fixed a bug in surface list update after split.
5. Fixed a bug in internal surface creation where the file names are not updated correctly when it runs multiple times.
6. Fixed a crash in intersection of surfaces on certain cases.
7. Fixed a bug in groups where Boolean operations are not working for All External Faces button.
8. Fixed a bug in link where the undo has to be clicked multiple times in certain cases to get back to original state.
9. Fixed a bug in internal wrap positioning.
10. Fixed a crash in transform button when an empty surface is given as input.
11. Fixed a bug in reverse nest for 2d cases where it fails to execute.
12. Fixed a bug in align corners to surface in 2D.
13. Fixed a bug in heal button where it fails on certain cases due to extra checks.
14. Fixed a bug in hole topology where topology for punched holes are created wrongly.
15. Fixed a bug in assignment panel workflow, where multiple buttons can be depressed at the same time.
16. Fixed a bug in mirror grid for 2D cases.
17. Fixed a bug in selection of grid nodes for spacing and node button.
18. Fixed a bug in quality button workflow.
19. Fixed a bug in property tab where it fails to show the property id.
20. Fixed a bug in right click on property block edge where it hangs the UI.
21. Fixed a bug in basic mesh display under CAD tab.
22. Fixed a crash in mesh button under CAD tab where it fails to generate sometimes.
23. Fixed a bug in 2d linear mesh export from CAD tab.
24. Fixed a bug in Neptuno solver format where the grid was not exporting properly.