

## ***FEMAP v11.2.2 New Features and Corrections***

### ***Updates and Enhancements***

#### **Connection Properties, Regions, and Connectors**

- Added the ability to copy Connections when using the Mesh, Copy...or Mesh, Rotate commands when the “Mesh Sizes, Loads, Constraints...” option is enabled and if both associated Connection Regions are also copied

#### **Interfaces - LS-DYNA**

- Added “Max Matrix Strn DFAILM” and “Max T Shear Strn DFAILS” fields to Material Type “54..LS-DYNA Enhanced Composite Damage”, which write the DFAILM and DFAILS values for the \*MAT\_ENHANCED\_COMPOSITE\_DAMAGE entry.
- Added “R Rot Constrained (1=Yes)”, “S Rot Constrained (1=Yes)”, “T Rot Constrained (1=Yes)”, “CST (0,1 or 2)”, and “SCOOR (-3 to 3)” fields to Material Type “71..LS-DYNA Cable Discrete Beam”, which write the RRCON, SRCON, TRCON, CST, and SCOOR values to the \*MAT\_CABLE\_DISCRETE\_BEAM entry.
- Added “CST (0,1 or 2)”, “SCOOR (-3 to 3)”, “R Rot Constrained (1=Yes)”, “S Rot Constrained (1=Yes)”, and “T Rot Constrained (1=Yes)” fields to Material Type “93..LS-DYNA Elastic 6DOF Spring Discrete Beam”, which write the CST, SCOOR, RRCON, SRCON, and TRCON values to the \*MAT\_ELASTIC\_6DOF\_SPRING\_DISCRETE\_BEAM entry.

#### **API**

- Updated feSolidRemoveRedundantPoint to make it more useful when cleaning up imported CAD geometry where vertices that simply should not be relevant can now be removed
- Added support for Boundary Surfaces in the API Entity Tracking object.

## ***Corrections***

#### **Analysis Manager**

- Corrected an issue with regard to Load and Constraint Sets in Subcases after Groups were renumbered. Previously, if any Load Sets or Constraint Sets selected in Subcases had the same ID as one of the Groups that was being renumbered, those Load/Constraint Set references were renumbered.
- Corrected an issue with regard to Groups used to limit entities when making output requests after Groups were renumbered. Previously, references to groups for any Output Selections in the Analysis Manager Subcases were not renumbered.
- Corrected an issue with regard to the Contact Group in the Boundary Condition dialog box after Groups were renumbered. Previously, the Contact Group reference in Analysis Manger Master Case or Subcases was not renumbered.
- Corrected an issue with regard to renumbering Load Sets. Previously, if the renumbered Load Sets were referenced in one or more Analysis Sets as the Temperature Set selection in either the Master Case or Subcases, or as the Bolt Preload Set in Subcases, the reference still contained the original Load Set ID.

## Performance Graphics

- Corrected an issue where nodal and elemental thermal loads would cause FEMAP to become unresponsive.
- Corrected an issue where function IDs for loads were not drawn correctly if in component display mode.
- Corrected an issue when curved beams drawn with large radii were not drawn properly.
- Corrected an issue where nodal loads being displayed as components were not being shown in the proper orientation.

## Connection Properties, Regions, and Connectors

- Corrected an issue in generation of Automatic Connections that in a few cases caused coincident faces to be missed when using detection strategies that were more aggressive than the defaults.

## GUI - General

- Corrected an issue which caused “Smart Snap” snap mode to not allow selection of the midpoint of a curve or center point of a curve when the graphics window was displaying a single group or multiple groups.

## GUI - Dockable Panes

### Meshing Toolbox - Mesh Surface Tool

- Corrected an issue in the that caused the Mesh Surface tool to resize and remesh surfaces that had not been selected.

### Model Info Tree

- Corrected an issue that caused the Renumber command on the context menu of the Model Info tree to fail for Load Definitions and Constraint Definitions unless the definitions were in Load/Constraint Set 1.

### Entity Info

- Corrected an issue where a \ character at the end of an Entity title or a { character or } character anywhere in an Entity title sent to the Entity Info window for any reason (typically during entity selection) could cause FEMAP to become unresponsive.

## Interfaces - NX Nastran

- Corrected an issue where PARAM,WMODAL,YES would not be written for Nastran Response Spectrum Analysis (PR 8264897).
- Corrected an issue when reading results for TRIA6 and QUAD8 elements in nonlinear analysis (SOL 601) that caused some Strain Invariant results to not be computed or calculated incorrectly.

## **Interfaces - Nastran**

- Corrected an issue in XDB translator that could cause some Grid Point Force vectors to be skipped.
- Corrected an issue in XDB translator that could cause Grid Point Force vectors to be incorrectly transformed when a local nodal output coordinate system was used.

## **Interfaces - ANSYS**

- Corrected an issue which caused linear or parabolic tetrahedral elements to appear as linear or parabolic pyramid elements when reading elements from an ANSYS input file (\*.cdb or \*.ans). (PR 7422995)
- Corrected an issue which caused plane strain elements and axisymmetric elements to potentially be assigned a Material Orientation during import of an ANSYS input file.

## **Interfaces - LS-DYNA**

- Corrected an issue where import of d3plot files for Japanese FEMAP was very slow. (PR 7405411)

## **Elements**

- Corrected an issue when using the Modify, Update Elements, Type command to change the “type” of selected elements from Plot Only Planar elements to Laminate Elements, which could cause FEMAP to exit unexpectedly.
- Corrected an issue which caused CBUSH elements created in earlier versions of FEMAP, which had both an orientation Vector specified and referenced a Property which had an Orientation Csys defined, to have their “Orientation” set to “Vector” instead of “From Property” when brought forward into FEMAP 11.2 or 11.2.1.
- Corrected an issue which caused CBUSH elements created in earlier versions of FEMAP, which had both a Node ID specified for orientation and referenced a Property which had an Orientation Csys defined, which would cause “Orientation” set to “Node” instead of “From Property” when brought forward into FEMAP 11.2 or 11.2.1.

## **Loads and Boundary Conditions**

- Corrected an issue which caused Distributed Loads on line elements to not be visible in the graphics window when a Nastran LOAD Combination Load Set was either the Active Load Set or the Load Set Selected for display.
- Corrected an issue when renumbering either Load Definitions or Constraint Definitions. Previously the definition IDs on the Loads/Constraints in the active Load/Constraint Set, not the selected Load/Constraint Set, were renumbered.

## **Geometry**

- Corrected an issue where meshed surface(s) that were being extended were not being remeshed because the extended surfaces were being renumbered, thus not getting remeshed. A different approach is now being used which does not renumber the extended surface(s).

## **Output and Post-Processing**

- Corrected an issue with transforming results that occurred if you attempted to transform into a coordinate system that did not exist. Previously this could happen if you renumbered coordinate systems. Now the coordinate system reference is properly renumbered and transforms are turned off if you specify a nonexistent system any other way. (PR 7455476)

## **Tools**

- Corrected an issue that occurred if you used the Tools, Mass Properties, Mesh Properties command and selected a coordinate system for the mass properties other than Global Rectangular and chose to create a node at the CG. Previously the CG was created at an incorrect location. (PR 7457501)

## **API**

- Corrected an issue which caused the return code for NextEmptyID, PrevEmptyID, NextID, and PrevID to be zReturnCode instead of “INT4” which matches the actual method return.
- Corrected an issue in feSolidFillet and feSolidChamfer that caused both of these methods to fail.
- Corrected an issue where FTO\_PYRAMID13 enum was missing for the topology property of the Element Object.