



Minor Enhancements

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7.1 Minor Enhancements

MSC/PATRAN Version 8 incorporates the following minor enhancements:

Support for RSSCON	Provides a multipoint constraint that models a clamped MSC/NASTRAN connection between a shell and a solid element using the “Node” type option. The two rotational DOFs of the shell are connected to the translational DOFs of the edges of the solid element face. The “Node” type option is not recommended for p-elements. The RSSCON using the “node” option is supported through the MSC/NASTRAN input file reader. The “elem” option of RSSCON is not imported (or exported), and will not appear in the reject file.
Support for MSC/NASTRAN Iterative Solver	MSC/PATRAN now includes support for the MSC/NASTRAN Iterative Solver. A toggle to enable the iterative solver is available on the Analysis “Translation Parameters” form.
Convection - Coupled Advection	This enhancement is available for the MSC/PATRAN MSC/NASTRAN Thermal Preference. It provides a modeling tool which will enable rapid construction of advection duct flow surfaces and adjoining fluid meshes. Any general duct or surface flow involving thermal effects (HVAC, turbine ducting, process piping, avionics electronic packaging) can benefit from this enhancement. The user will be able to define general duct flow characteristics for the given problem. See Convection—Coupled Advection (p. 3-86) in MSC/PATRAN NASTRAN Preference Guide, Volume 2: Thermal Analysis.
Graphics Preferences	The MSC/PATRAN Graphics Preferences have been simplified for V8. The “Auto Center” toggle has been removed, and its function incorporated into “Auto Fit View”. This makes the functionality easier to use and understand. Also, the “Auto Fit View” toggle is set off by default. These improvements will make modeling much easier with the default settings.
Center of Rotation Icon	The MSC/PATRAN toolbar now includes a Center of Rotation icon. This icon allows the user to specify the point, node or screen position desired for the rotation center. No changes in pan, zoom or viewing angle occur when a new center is selected.
Direct Control of Verification Fringe Attributes	A button was added to the Loads/Boundary Conditions Plot Contours, FEM/Verify and Properties/Show forms to allow direct control of fringe attributes.

Plot/Erase Form The Plot/Erase form has been simplified for faster entity selection.

The image shows a screenshot of the 'Plot/Erase' dialog box. The dialog has a title bar 'Plot/Erase' with a close button. Inside, there is a section 'Selected Entities' with a text input field. Below this are two buttons: 'Plot' and 'Erase'. A horizontal line separates this from the next section, 'Coord. Frames...', which has a button. Another horizontal line follows. The next section is 'Posted Entities', which contains three sub-sections: 'Geometry', 'FEM', and 'All'. Each sub-section has its own 'Plot' and 'Erase' buttons. At the bottom of the dialog is an 'OK' button.

Load Case Form

The Load Case form has been modified to allow access to the many LBC scale factors available in MSC/PATRAN. In addition, it adds an overall “superposition” scale factor useful for scaling entire load cases.

Assign/Prioritize Load/BCs

Loads/BCs Selection

Select Individual Load/BCs

- Displ_fixed_base
- Displ_X-symmetry
- Displ_Y-symmetry
- Press_External-pressure

Select Loads/BCs from Existing Load Cases

- Default
- case_1
- case_2
- new

Additional Loads/BCs Controls...

Loads/BCs Scaling

Input Scale Factor: 1.0

	ScaleFactor	Existing Load Case Scale Factor	Additional Scale Factor
X-symmetry	1.0	2.5	1.5
Y-symmetry	1.0		
External-pressure	2.0		

Overwrite Combine

Load/BC Type [Add] Value [Displacement] **Sort By Priority**

Assigned Loads/BCs

	Type	ScaleFactor	Priority
X-symmetry	Displacement	1.0	1
Y-symmetry	Displacement	1.0	Add
External-pressure	Pressure	10.0	Add
Internal-pressure	Pressure	-5.0	Add

Remove Selected Rows Remove All Rows Undo Spreadsheet

OK Cancel Reset

MPC Deformaties Plotted

For Results Deformation plots including MPCs, the MPCs are now plotted in their deformed shapes.

New Color Spectrums

Four new fringe spectrums were added to the Spectrums form.

MARC Contact Enhancements

Contact Table support has been added for MARC, which enables the user to define the interaction among contact bodies. This limits the amount of checking done for contact bodies, which can be expensive when a large number of contact bodies exist in a model. This table is in **Set Contact Parameters** (p. 3-246) in MSC/PATRAN MARC Preference Guide. You must have a contact body defined in order to access this table.

ABAQUS Version 5.7

MSC/PATRAN Version 8 now supports ABAQUS Version 5.7-1. These libraries provide a substantial performance increase on the Windows NT platform.

MSC/ABAQUS Rebar Support

Post-processing of MSC/ABAQUS results for rebar forces (RBFOR), angles (RBANG), and change in angles (RBROT) are now supported.

Support for ABAQUS S3/S4 Elements

Post-processing support for ABAQUS S3/S4 shell elements has been added.

ABAQUS Input File Reader Added

An ABAQUS Input File Reader has been added to the MSC/PATRAN Utilities.

MSC/DropTest to become an Independent Product

The MSC/DropTest Preference has been removed from MSC/PATRAN Version 8. MSC/DropTest will soon be available through your MSC sales staff. MSC/DropTest users should not install MSC/PATRAN Version 8, until they they have received the new version of MSC/DropTest.

OpenGL Support for HP Hardware

MSC/PATRAN Version 8 now supports OpenGL hardware graphics acceleration on the Visualize FX series graphics board. The HP OpenGL libraries are included with HP-UX 10.20 ACE, and are required to use the OpenGL driver. OpenGL support for these graphics boards is in addition to the standard Starbase support that has always been available with MSC/PATRAN.

With the Visualize FX series graphics, you can choose to use either starbase or OpenGL. This is done by editing the settings.pcl file as follows:

For OpenGL hardware graphics:

```
pref_env_set_string( "graphics_hardware", "YES" )
pref_env_set_string( "graphics_hardware_OpenGL", "YES" )
```

For Starbase hardware graphics:

```
pref_env_set_string( "graphics_hardware", "YES" )
pref_env_set_string( "graphics_hardware_OpenGL", "NO" )
```

▼ Options

◀◀ Retrace



■ Exit