

**Description of New Features and Bug Fixes at Version 4.02n**

			Description
1	New	Default templates	A menu option has been added to allow the user to just re-read the default templates, skipping any user defined templates.
2	Bug Fix	User Templates	With previous versions it was possible when adding new templates for them not to appear on the 'file /new' selection boxes. This has now been fixed.
3	Change	Compliance Visibility	The default settings for the compliance graphical visibility's have been changed from 'off' to 'on'. This will only affect new users since existing users settings are saved to the ini file.
4	New	Templates	A descriptive string has been added to the template editor to identify the current status of each template. The string identifies whether the template source is, 'not defined', 'default', 'user' or 'custom'.
5	New	Graph Autoscale	New autoscale option added to the graphs, allows an autoscale to be applied to within an user controllable increment. The increment can be edited through the axes scale window.
6	New	Graph Y-axes zero point	The visibility of the y-axes zero point is now controllable separately. When on this adds a horizontal, (or vertical if axes switched) , line through the y=0 point.
7	New	Window tiling	Previously the tiling of the display windows would arrange them in the order that they were last selected. This was not usually what was required. The tiling option based on creation order has been added to provide a more intuitive function.
8	New	Window tiling settings	The correct saving/positioning of the graph windows can be affected by the users screen resolution. This can lead to 'drift' of windows when re-opening the application with window positions saved. Users can control some of the assumed offset positions to control this.
9	New	Edit – Redo	A editing redo option has been added to the interface. This has an equivalent shortcut key of Ctrl+Y
10	New	Scope Lines	The scope line store option has been extended to 5 positions. Each scope line position has a numerical label associated with it to aid graphical identification.
11	Bug Fix	External forces	Previously it has been possible for a user to define a force orientation that had a zero distance between the definition points. This has now been trapped for and flagged as an error during definition.
12	Bug Fix	SDF files	Previously it was possible for the SDF file writer to display incorrect values, this was particularly the case when using large bump/rebound articulations. This could occur even if the graph displays appeared normal. The SDF solver has been changed to be the same as used for the main routines to resolve this issue.
13	Bug Fix	Bush z-axis	Previously if a points bush z-axis was aligned to a point when



that point moved during the articulation event the z-axis did not follow it but retained the original deltas. This has now been changed such that the axis will always point to the defined point. This was most significant on strut suspension templates.

14	Bug Fix	Force Sets	Problem removing/adding force sets has been resolved. Was leading to an incorrect number for the 'active' force set display.
15	Bug Fix	Raven module`	The virtual SKCMS export to the Raven module has been updated to include the correct sign on a number of the splines.
16	Bug Fix	Add End	The new feature of merging two models failed when adding a rear suspension to an existing front. This has now been resolved.
17	Bug Fix	Zero Wheelbase	The routine used to trap for users defining a 'zero' wheelbase was not working on the correct axis setting. This has now been fixed.
18	New	TCP slope	The incremental gradient of the tyre contact path in the x/z plane has been added to the list of y-variables. Primarily added as part of the Raven SKCMS export.
19	New	Raven Export Defaults	A number of hard coded values used in the SKCMS export to Raven have been made as editable, and are saved to the data file.