

SAP2000® (Version 16.0.1) Release Notes

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Notice Date: 2013-09-27

This file lists all changes made to SAP2000 since the previous version. **Most changes do not affect most users.** Incidents marked with an asterisk (*) in the first column of the tables below are more significant and are included in the ReadMe file.

This release corrects three problems that were introduced with version 16.0.0 (Incidents 58026, 58467, and 58531) which do not affect most users. The other Incidents listed below were already included in version 16.0.0 but inadvertently omitted from the Release Notes.

Changes from v16.0.0 (Released 2013-09-10)

User Interface

Enhancements Implemented

*	Incident	Description
	55199	A new Offset View option is available for the Set Display Options command that shows the offset position of frame objects or elements with insertion points and shell objects or elements with joint offset overwrites. The offset location is drawn connected to the end joints in their original locations, which are not offset. This view also allows the plotting of the local axes as they are transformed to account for the offset location. The "CSI Analysis Reference Manual" has been updated to better describe how the object local axes are transformed to account for the case where the frame or shell object after offset is not parallel to its original position before offset. This feature was added with version 16.0.0 but was inadvertently omitted from the Release Notes.

Loading

Enhancements Implemented

*	Incident	Description
*	48510	The application of loads specified in the local coordinate system of a frame object has been changed for the case where the assigned frame insertion points change the direction of the local-1 axis. This can occur when the joints offsets are not equal at the two ends or for certain cases where non-centroidal cardinal points are assigned to a non-prismatic object. Previously the loads were applied in the direction of the local axes as calculated for the frame orientation based on the joint locations, i.e., before considering the insertion points. In addition, distributed loads and self-weight were based on the length before offsets. This was consistent with how the loads were displayed in the graphical user interface. Now the loads will be applied in the direction of the local axes as calculated for the frame after the insertion points are considered, and will be based on the length after offset. This is consistent with how the loads are now displayed in the graphical user interface when the new "Offset" display option selected. When the "Standard" display option is selected, the loads are displayed in the nominal coordinate system as before. This change does not affect the common cases where loads are applied in the global or other fixed coordinate system, or where the neutral axis remains parallel before and after considering the insertion points. Models with unequal frame insertion points may produce somewhat different results from previous versions, although the effect will usually be small. This change was made for version 16.0.0 but was inadvertently omitted from the Release Notes.

Analysis

Incidents Resolved

*	Incident	Description
	47795	An incident was resolved where the bounding box of frame elements did not properly account for the cardinal point when used to determine if a tendon was contained within the element. Instead, the bounding box was used as if the insertion point was at the centroid of the frame element. Tendons joints that fell outside the expected bounding box were connected to the nearest element, resulting in visible jumps in the tendon force response. This incident was resolved with version 16.0.0 but was inadvertently omitted from the Release Notes.

Results Display and Output

Incidents Resolved

*	Incident	Description
*	39130	An incident was resolved where, for certain rare cases, the frame forces or stresses plotted in the graphical model window for a linear load case could be based on the wrong nonlinear stiffness case, which could produce incorrect values. This effect was usually small, and would resolve itself after plotting the results for any other linear load case. Frame forces and stresses displayed and exported in tables were not affected. Design results were not affected. No other response quantity (displacements, reactions, shell response, etc.) was affected. This incident was resolved with version 16.0.0 but was inadvertently omitted from the Release Notes.
	58531	An incident was resolved where an error message was generated when displaying frame forces or stresses for a moving load case when cables were present in the model as displayed on the screen, or when requesting tabular output for frame forces or stresses for a moving load case when cables were included in the group selected for output. After the error message was displayed, graphical and/or tabular results were available for frame and tendon objects, but not for the cable objects. When all cables were excluded from the graphical or tabular output, no error message was generated. In any case, the results for frame and tendon objects were not affected, and the results for cable objects were not available. This incident affected version 16.0.0 only, not any prior versions.

External Import/Export

Incidents Resolved

*	Incident	Description
	58467	An incident was resolved where point, line, and area loads exported to an IFC analytical model view file were written out without being assigned to any load pattern. This only affected applications which import loads from IFC analytical model view files. Loads are now assigned to appropriate load patterns in analytical model view IFC files. Only version 16.0.0 was affected.

Data Files (*.SDB, *.S2K, *.\$2K)

Incidents Resolved

*	Incident	Description
	58026	An incident was resolved where SAP2000 models from versions prior to v16.0.0 may not open in v16.0.0 if those models contained named displays. Deleting the named displays and saving the model in the older version allowed the model to be opened in v16.0.0. Alternatively, importing the .S2K text file into v16.0.0 would avoid this problem, although the named displays would not be imported.

Miscellaneous

*	Incident	Description
	58186	The version number has been changed to v16.0.1 for a new minor release.