

# CSiBridge® 2014 (Version 16.0.2) Release Notes

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**Notice Date: 2013-10-31**

This file lists all changes made to CSiBridge 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.

## **Changes from v16.0.1 (Released 2013-10-02)**

### **Modeling**

#### **Enhancements Implemented**

<b>*</b>	<b>Incident</b>	<b>Description</b>
	59292	New standard sections have been added to the Australian/New Zealand section-property database file AusNZV8.pro. The new sections included are the Steel I HCC, HCB and HCBC sections.

### **Application Programming Interface**

#### **Enhancements Implemented**

<b>*</b>	<b>Incident</b>	<b>Description</b>
	58766	New functions have been added to the OAPI to specify which section cuts are selected for output: SapObject.SapModel.Results.Setup.SelectAllSectionCutsForOutput, SapObject.SapModel.Results.Setup.SetSectionCutSelectedForOutput, and SapObject.SapModel.Results.Setup.GetSectionCutSelectedForOutput. In addition, the functions that define section cuts now set newly defined section cuts to be initially selected for output; previously the default for newly defined section cuts was not to be selected for output.

### **Installation**

#### **Enhancements Implemented**

<b>*</b>	<b>Incident</b>	<b>Description</b>
	59186	An enhancement has been implemented to check for updates when the program starts and inform the user if a new version is available. This check is also manually available from a new menu item, Help > Check for Updates.

## User Interface and Display Incidents Resolved

* Incident	Description
58967	An incident was resolved in which a runtime error was generated when using the command Display > Show Misc. Assigns > Links.
59120	An incident was resolved for the Bridge Modeler when defining a precast I-girder bridge deck-section where the width of the bounding box of the precast I-girder section was being used instead of the width of the top flange to check the validity of the section dimensions L3 and L4. This could unnecessarily restrict the valid range allowed for the L3 or L4 values when the bottom flange was wider than the top flange.

## Bridge Modeler Incidents Resolved

* Incident	Description
31008	An incident was resolved for the Bridge Modeler in which the built-in section cut forces and moments displayed using the command Display > Show Bridge Forces/Stresses sometimes exhibited unexpectedly large jumps along the length of the bridge in the following special case: (1) The deck section was a concrete T-beam, (2) The depth of the stem had significant nonprismatic variation, (3) The bridge object was updated as an area model, and (4) The area-element mesh size was less than or equal to the area-object mesh size used for updating the linked bridge object. In such a case, the mesh used for the stem did not always align with the mesh of deck and the section cuts, causing the jumps. Although the results were incorrect, the effect was obvious. Only the superstructure section-cut results were affected. Displacements, reactions, and all other element forces and stresses were correct. This incident was resolved with version 16.0.0 but inadvertently omitted from the Release Notes.

## Analysis Incidents Resolved

* Incident	Description
* 58858	An incident has been resolved where the mass source, when specified to be from loads, may have used the incorrect load patterns for point loads assigned to joints. This error did not affect the default mass source, which is from element mass and additional mass, and it did not affect mass source from loads on elements other than joints. The following is a more detailed description. This error could occur when the loads at a joint had not been assigned to all load patterns in sequence from the first defined load pattern and including all load patterns used for mass source. For example, if the first three load patterns were "A", "B", and "C" and no loads had been assigned in load pattern "A" for a particular joint, then any loads assigned in load patterns "B" and "C" for that joint may have been incorrectly used to calculate mass source. If any loads were assigned at that joint in load pattern "A", even if not used for mass source, no error would occur. The common case where loads used for mass source were assigned to the first load pattern, "DEAD", was not affected. This error affected versions 16.0.0 and 16.0.1.
* 59129	An incident has been resolved where the superstructure moving-load response shown in the Bridge Object Response Display form did not include vehicle span-length effects if the model was closed and re-opened after running the analysis, or if the analysis was run out-of-process. Vehicle span-length effects were only included in the superstructure moving-load response when the analysis was run in-process and without closing the model after running the analysis. This error did not affect the response for individual joints, frames, shells, and other objects in any case. This error affected versions 16.0.0 and 16.0.1.
* 59178	An incident has been resolved where incorrect results could have been produced for a linear load case that applied a strain or temperature load to frame objects if that load case used the stiffness from the end of a time-dependent staged-construction load case where the modulus of elasticity of the loaded frame objects varied with age. The most notable effect of this error was for the forces

*	Incident	Description
		and stress in the frame objects that had both the applied strain or temperature load and time-varying elasticity, although the displacement results could also have been incorrect, having a lesser effect on other response in the model as well. Only the specific situation described was affected. Only version 16.0.0 and 16.0.1 were affected.
*	59822	An incident has been resolved for rigid-body constraints where the coordinate system used for the constrained rotational degrees of freedom (DOF) was not always correct in the following restricted cases: (1) All three translational DOF were constrained and either one or two rotational DOF were constrained. (2) No translational DOF were constrained and either one or two rotational DOF were constrained. (3) Two translational DOF were constrained and two rotational DOF were constrained, but the two pairs of DOF were not along the same pair of axes [for example, UX, UY, RX, RZ]. (4) Two translational DOF were constrained and one rotational DOF was constrained along the same axis as one of the two translational DOF [for example, UX, UY, RX]. Constraints where all three of the rotations or none of the rotations were constrained were not affected. Common constraint cases were not affected, for example: Diaphragm [UX, UY, RZ], Plate [UZ, RX, RY], 2-D Beam [UZ, RY], 3-D Beam [UY, UZ, RY, RZ], Shaft [UX, RX], Full-body [UX, UY, UZ, RX, RY, RZ], and permutations of these. Equal and Local constraints were not affected. Weld constraints were affected for the same selections of DOF's as affected Body constraints. When this error occurred, the selected rotational DOF were constrained about an axis or axes that may have been different from those specified; these axes were model-dependent and were not easily predicted. This error, while not common, affected versions 15.0.0 to v16.0.1.

## Results Display and Output

### Incidents Resolved

*	Incident	Description
	58903	An incident was resolved where a runtime error was generated when trying to display the superstructure response for steel U-Beams in the Bridge Object Response Display Form if the concrete haunch height defined for the corresponding steel U-girder bridge section was less than the Auto Merge Tolerance (command Options > Dimensions/Tolerances). This was a display issue only and did not affect the analysis results.
	59655	An incident was resolved for joints with a local axis rotation assignment, in which the values shown for joint displacements at the cursor when scrolling with the mouse were in the global coordinate system instead of the joint local coordinate system values. The right-click form and database table showed the correct joint local displacements. This was only a discrepancy in what results were being displayed and did not affect the overall analysis results. This affected versions 16.0.0 and 16.0.1 only.

## Installation

### Incidents Resolved

*	Incident	Description
	58709	An incident was resolved in which the CSiBridge.exe was not registered during installation. This caused the Open API to be inaccessible, but could be corrected by manually registering the executable.
	58721	An incident was resolved for certain cases in which, when v16.0.0 had been previously installed, a warning message about an incorrect Level.txt value could appear. Closing the message would allow the program to run as normal.

## Miscellaneous

*	Incident	Description
	58845	The version number has been changed to v16.0.2 for a new minor release.