OpenSTAAD API Reference

Overview

OpenSTAAD is a library of exposed functions allowing engineers access to STAAD.Pro's internal functions and routines as well as its graphical commands. With OpenSTAAD, you can use Visual Basic for Applications (VBA) macros to perform such tasks as automating repetitive modeling or post-processing tasks or embedding customized design routines.

OpenSTAAD allows engineers and other users to link in-house or third-party applications with STAAD.Pro. For example, a user might create a spreadsheet in Excel to analyze and design a circular base plate using support reactions from STAAD. With OpenSTAAD, a simple macro can be written in Excel or within the STAAD environment to retrieve the appropriate STAAD data and automatically link the results. If the STAAD file changes, so will the Excel sheet! With a built-in VBA editor, macros can be written inside STAAD using VBA to create new dialog boxes or menu items which run design codes or specific structural components (like certain connections) that automatically link to STAAD's familiar reporting tables. A cumbersome export/import link between two or three software is not required.

Unit System: The values that are returned by API's will be determined by the current base unit.

If the base unit is English, then all values that are derived from a length unit, e.g. dimensions, areas, stresses, will be based on inches, 'in'. All values derived from a force unit, e.g. Axial force, moments, stresses, etc, will be based on kilopounds, 'KIP'

If the base unit is Metric, then all values that are derived from a length unit, will be based on Meters, 'm'. All values derived from a force unit, will be based on kilo newtons, 'kNs'

Note that there is a function available to obtain the current base unit:- OpenSTAADUI::GetBaseUnit()