INTRODUCTION

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. Following an open architecture paradigm, OpenSTAAD was built using ATLClosed COMClosed and COM+ standards as specified by Microsoft. This allows OpenSTAAD to be used in a macro application like Microsoft Excel or Autodesk AutoCAD,C++, and so on. OpenSTAAD can also be used to link STAAD data to Web-based applications using ActiveX, HTMLClosed and ASPClosed.

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.

Although OpenSTAAD supports all major programming languages today, it is very difficult to document the usage of each and every function in all of these languages. Most of the example programs or code snippets for each documented OpenSTAAD function are written in VBA for Excel or AutoCAD VBA.

The Macros for generating customized indurating duct has been written in Visual Basic in the OpenSTAAD environment within STAADPro.