SLAM

Structural Layout Modeler

SHEAR3D CONSULTING

CREATE | ANALYZE | DESIGN

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Welcome to Shear3D Consulting. Home to Structural Engineering Professionals.

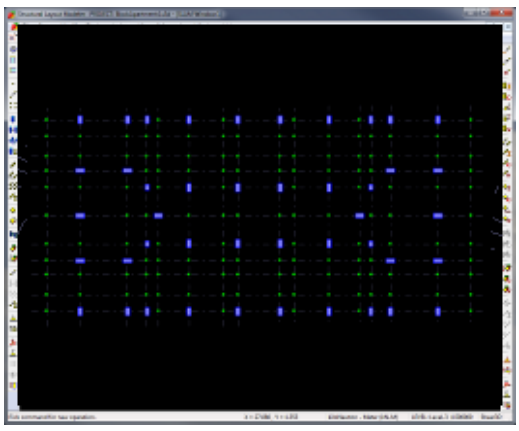
Product Information Brochure

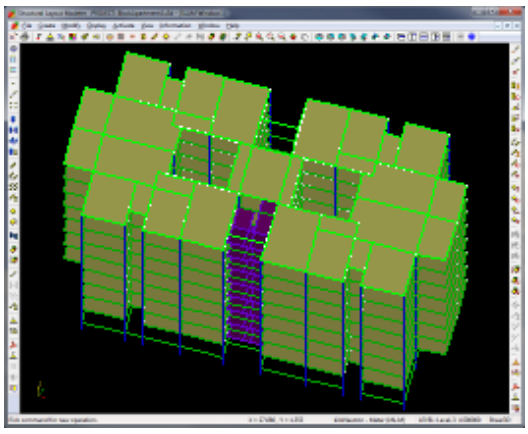
Structural Layout Modeler (SLAM™) is an application to model building structures in 3D with simple modeling concepts defined in 2D with 3D visualization capabilities. SLAM provides an easy modeling concept taking advantage of the general building designed in levels and plan laid out using grid lines.

SLAM also provides features to model lintels and chajjas to account for their weight accurately during analysis of the structure. SLAM also provides the ability to model Columns, Beams, Slabs, Truss, and Plate/Shell elements to model buildings that are complex. SLAM also provides the ability to define and manage various structural properties, ability to export and import these properties across projects enabling reuse of properties saving substantial modeling time.

SLAM provides the ability to generate structural layout automatically using grid lines, copy structural elements across levels that area repetitive, create elements by array and offset copy, thus saving substantial time in modeling. SLAM also provides comprehensive features to model loads due to walls, and auto generate slab, seismic and wind loads from structural layouts defined.

In addition it allows import of general structural models, like space frame, grids, towers, created in AutoCAD using DXF interface to be combined with building structure modeled completely in SLAM. This allows integrated analysis of entire complex structure for accurate design.

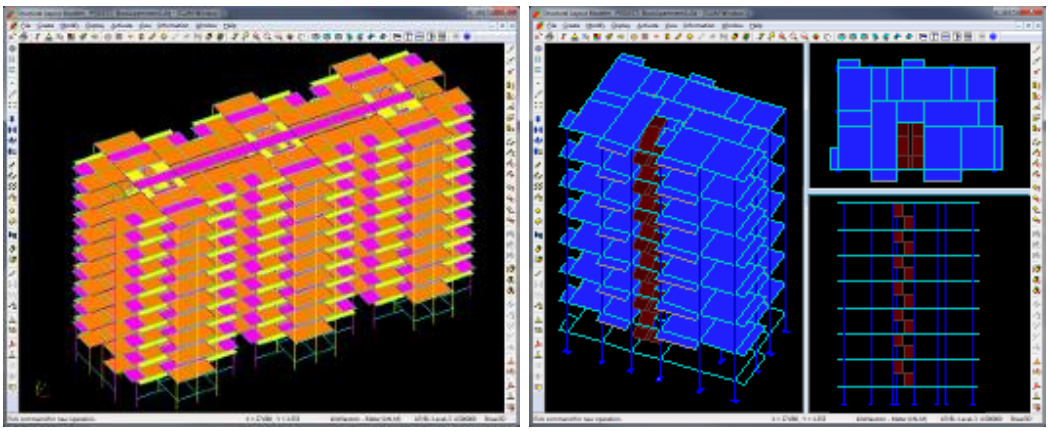




SLAM is designed to model multi-level buildings taking advantage of similarity in different levels by simplifying steps and eliminate monotonous tasks. It further automates many repetitive operations saving significant time in the design of buildings. SLAM provides the following features for structural modeling.

- Simple modeling concept extending building levels and grids
- Create nodes and offset and array copy of nodes
- Create and manage structural properties
- Export and Import of structural properties for sharing across projects

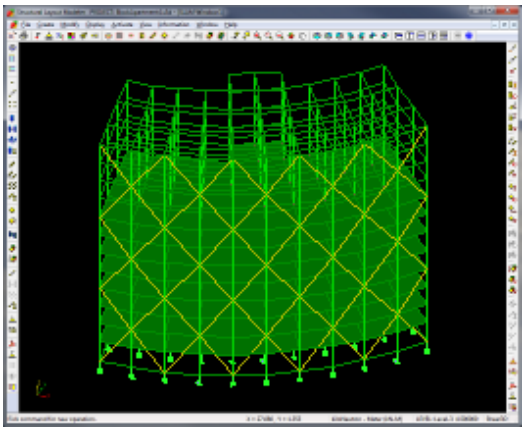
- Automatic structural layout generation and selective copy feature across levels
- Create column elements and offset and array copy column elements
- Modify column properties, match properties and convert to truss elements
- Create beam elements and offset and array copy beam elements
- Modify beam properties, match properties and convert to truss elements
- Create and manage standard and sunken slab panels using single click process
- Create and manage lintels and chajja elements
- Create and manage walls on beams
- Create and manage standard stair case types
- Auto load transfer from slabs, walls, lintels, chajja and stairs
- Create and modify truss, beam and plate/shell element properties
- Create nodal restraints and beam element end force releases
- Nodal loads, beam loads and plate/shell pressure loads
- Auto seismic and wind load generation
- Create truss elements and offset and array copy of truss elements
- Modify truss elements property, match property and convert to beam elements
- Create of plate/shell elements and offset and array copy of plate/shell elements
- Modify plate/shell element property, match property feature
- Import DXF geometric models and convert to structural model
- Create multiple load cases and load combinations
- Create analysis file for 3D finite element analysis

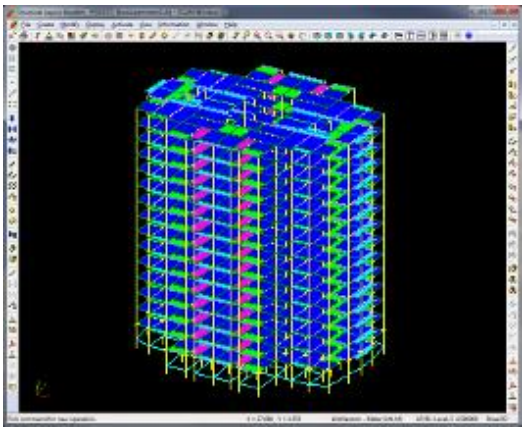


The accuracy and success of the analysis of a structure by finite element analysis depends of the accuracy with which the structure is geometrically modeled, the definition of appropriate boundary conditions and loads. SLAM provides the following features for structural model visualization, verification for accuracy to derive accurate and consistent analysis results.

- Structural element activation for display by element attributes
- Element identification by multi-color display
- Element/Node numbering
- Element information display
- Hidden line removal

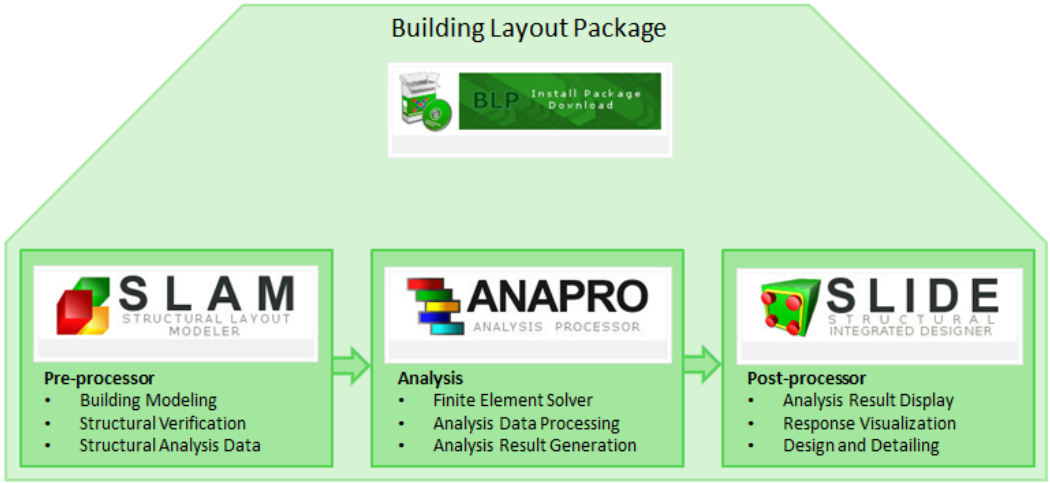
- Shrunken element display
- Graphical restraint and force display
- Boundary line display
- Multiple window display
- Hard copy prints of graphical display





Solution Package

SLAM is released as part of Building Layout Structure Package. This package includes applications that provide user friendly interface that enables engineers to model, analyze, design and detail RC multilevel structures with ease and efficiency, increasing accuracy, confidence and reducing overall time.



About Software Products

We share decades of experience in consulting and software development, in the form of convenient and efficient structural engineering software applications, to solve every day structural engineering challenges with ease and confidence. These applications help to take a structural engineering problem from conceptual creation to engineering analysis to final design and drawings. They have been proven by use in modeling, analysis and design of small to large projects by practicing structural engineers in-house and other reputed consulting companies.

All applications are designed to help structural engineers and provide:

- End to End solution for structural engineering problems
- Easy to use user interface with least learning curve
- Detailed online help documentation access
- Eliminate monotonous tedious tasks and eliminate errors
- Analyze and Design structures with ease and confidence
- Reduce turnaround time and provide timely service to clients

Software Products

Shear3D Consulting has a full set of comprehensive structural engineering applications. Overviews

ICODE INTERACTIVE COMPONENT DESIGNER

Dialog based interactive application to quickly design /verify / detail individual structural components. BEAM, COLUMN, SLAB, ISOLATED FOOTING and COMBINED FOOTING. -- FREE Design Modules –

DXFMOD DXF STRUCTURAL MODELER

Application to model general structures for structural analysis. Leverages DXF format to convert CAD model to structural models. Provides pre-processing features to verify accuracy of modeling.

ANAPRO ANALYSIS PROCESSOR

Finite element method based solver to analyze structural models. Provides Truss, Beam, Spring, Plate/Shell elements needed to simulate and analyze normal structures by structural engineers

STRIP STRUCTURAL INVESTIGATION PROCESSOR

Application to post-process structural analysis data. Provides extensive set of features to understand the behavior of structures. Designed to work with with other 3rd party structural model and analysis tools using neutral format.

SLAM STRUCTURAL LAYOUT MODELER

Application to model multi-level RC frame-slab building structures subject to static and seismic load conditions as per IS code requirements. Provides features for easy and accurate modeling, with reduced modeling time.

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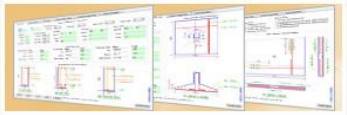
SLIDE STRUCTURAL INTEGRATED DESIGNER

Application to design and detail RC structure as per IS code in an interactive or automated environment. Provides features to post-process analysis data to understand the behavior of structure, design and generate detailed drawings.

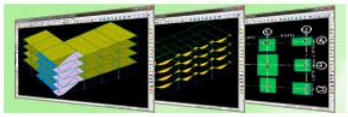
Software Solutions

We provide software solutions to the needs of structural engineers. Our solutions are packaged in three convenient forms catering to the various levels of solution required by structural engineers.



This package inludes applications that provide user friendly interface to design, verify and detail individual structural components in an interactive environment. Very useful for everyday quick design and checking..

This package includes applications that provde user friendly interface that enable engineers to model, preprocess, analze and postprocess general structures. Provides DXF interface to leverage CAD data as input for modeling and output for reporting..



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Contact

Please visit us on the web at www.shear3d.com for more details on comprehensive solutions offered by Shear3D Consulting. If you have questions, please contact us through email at info@shear3d.com.