DXFMOD

DXF Structural Modeler

SHEAR3D CONSULTING

CREATE | ANALYZE | DESIGN

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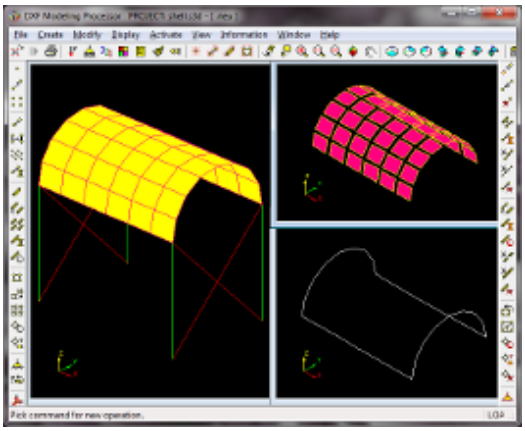
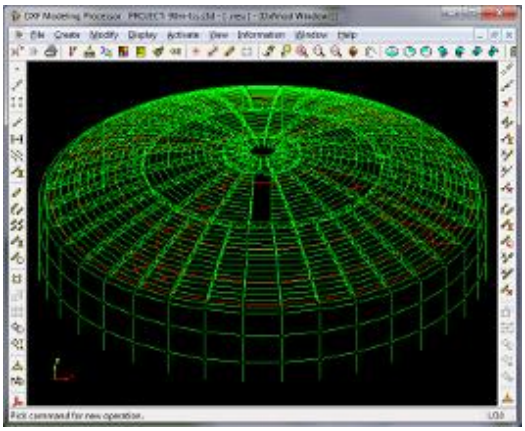
Welcome to Shear3D Consulting. Home to Structural Engineering Professionals.

Product Information Brochure

DXF Structural Modeler (DXFMOD™) is a standalone application to convert 2D and 3D structures modeled in AutoCAD environment from either an initial concept structure or a more refined model. The aim of DXFMOD application is to provide graphical interface to model general structures, to take away the laborious process of creating the model manually, generate numeric data automatically and for model verification.

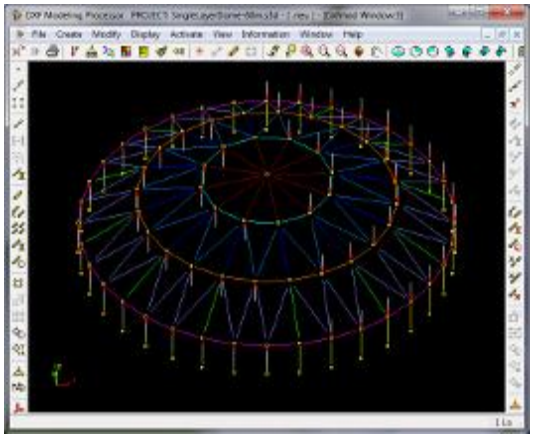
It can also be used as an independent structural modeler to model any structure either in 2D or 3D beginning from scratch to a comprehensive structural model. It can be used to model and analyze structures simulated using Truss, Beam and Plate/Shell elements. It provides the ability to create finite element models of structures like space frames, shells, water tanks etc. It can be used independent of any modeling and analysis software package through a Neutral Data Format supported by STRIP. It provides a comprehensive set of features to enable a structural designer to model and verify the accuracy of structural modeling.

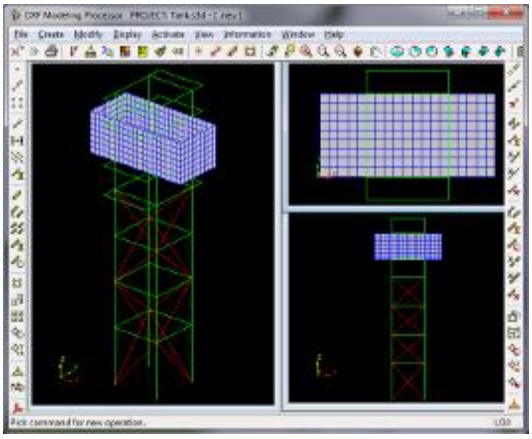




DXFMOD is designed to support direct modeling of structures from scratch or modeling from a geometric model created in AutoCAD using available architectural drawings. DXFMOD provides the following features for structural modeling.

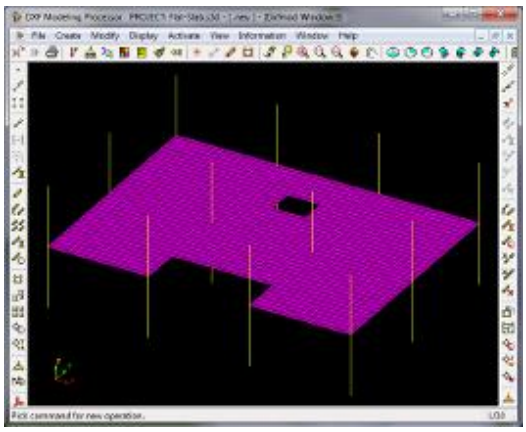
- Conversion of DXF geometric models to structural model
- Create new nodes and offset and array copy of nodes
- Create new truss elements and offset and array copy of truss elements
- Modify truss elements property, match property and convert to beam elements
- Create new beam elements and offset and array copy beam elements
- Modify beam elements properties, match property and convert to truss elements
- Create of new shell elements and offset and array copy of plate/shell elements
- Modify plate/shell element property, match property
- Create and modify truss, beam and plate/shell element properties
- Create nodal restraints and beam element end force releases
- Create multiple load cases, nodal, beam and plate/shell pressure loads
- Create analysis file for 3D finite element analysis

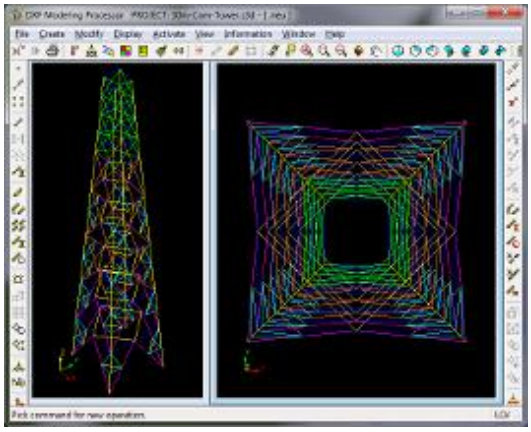




The accuracy and success of the analysis of a structure by finite element analysis depends on the accuracy with which the structure is geometrically modeled, the definition of appropriate boundary conditions and loads. DXFMOD provides the following features for the structural model visualization, verification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

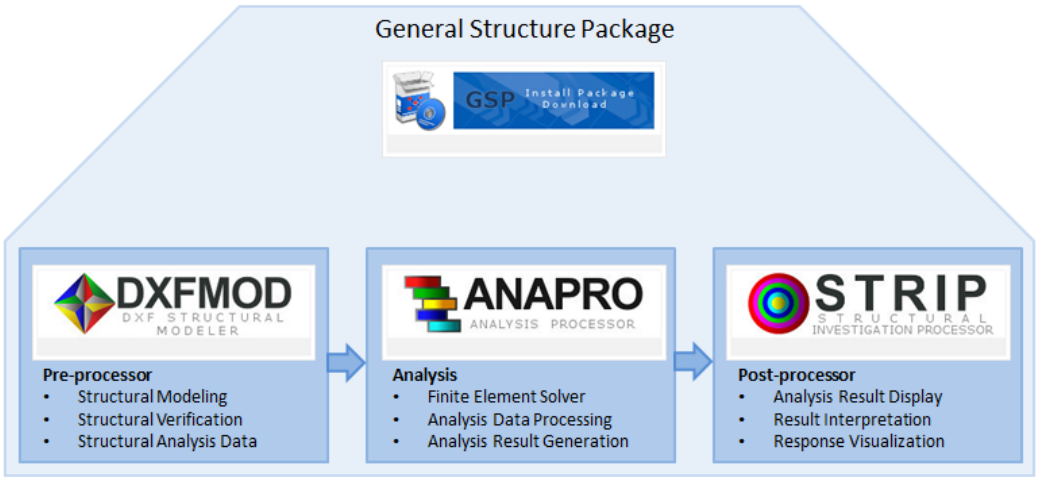
- Structural element activation for display by element attributes
- Element identification by multi-color display
- Element/Node numbering
- Element information display
- Hidden line removal
- Shrunken element display
- Graphical restraint and force display
- Boundary line display
- Multiple window display
- Hard copy prints of graphical display





Solution Package

DXFMOD is released as part of General Structure Package. This package includes applications that provide user friendly interface that enables engineers to model, preprocess, analyze and post-process general structures. Also provides DXF interface to leverage CAD data as input for modeling and output for engineering reports.



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

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Software Products

Shear3D Consulting has a full set of comprehensive structural engineering applications. Overviews of some of the products that are currently being made available are given below.

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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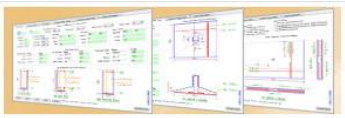
SLIDE STRUCTURAL INTEGRATED DESIGNER

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.

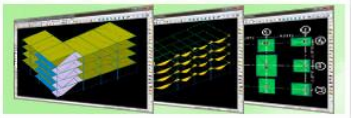
Software Solutions

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..



This package includes applications that provide user friendly interface that enable engineers to model, analyze, design and detail RC multilevel structures with ease and efficiency, increasing accuracy, confidence and reducing overall time..

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.