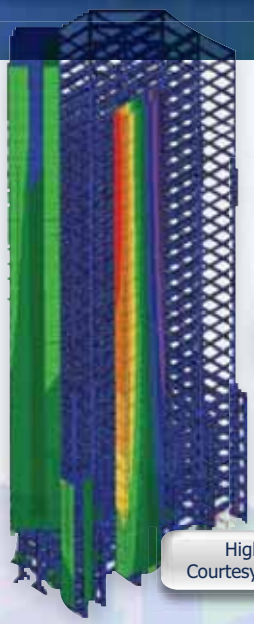
P-FRAME® and S-FRAME®

2D/3D/4D Model Generators with Advanced Non-linear Analysis

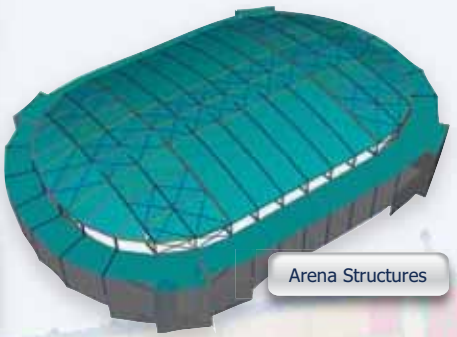
SOFTEK STRUCTURAL OFFICE

P-FRAME (2D) and S-FRAME (2D & 3D) include:

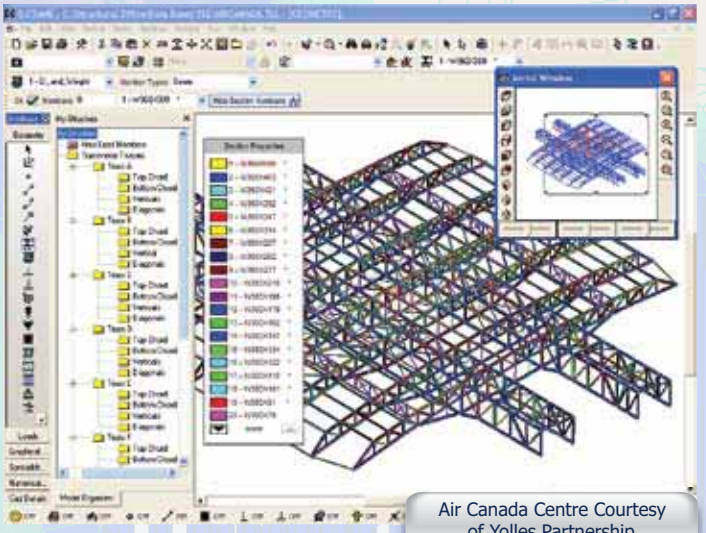
- Thousands of users worldwide.
- Fast dynamic graphical input/output including rendered views.
- Updated graphical interface with many enhancements to speed model creation and editing.
- Model organizer – simple user defined grouping of input and output into folders.
- Aerial window – simple way to view models in different configurations and orientations quickly and easily.
- Enhanced clone tool for rapid generation of large repetitive structures.
- Staged construction analysis allows 4D analysis of structures with discrete changes over time.
- Physical member modeling giving a wide range of benefits including simplified model definition, results assessment, setting of member design criteria, and integration with fabrication tools.
- Automatic generation of trusses, frames, arches, circles and spirals.
- User defined coordinate system – cartesian, cylindrical, and spherical to aid in the modeling process.
- Full undo and redo with structure and data integrity checks.
- International section and material database plus facilities to input tapered sections and custom sections.
- Dynamic grid lines to aid in complex modeling.
- Supports non-sequential joint numbering.
- Merge files with existing structures.



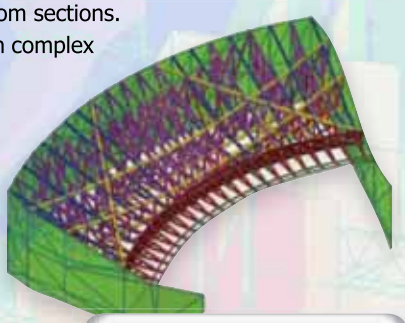
High Rise Building
Courtesy of W.S. Atkins Ltd.



Arena Structures

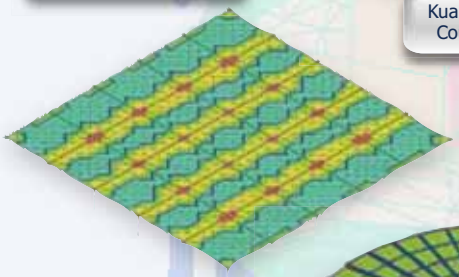


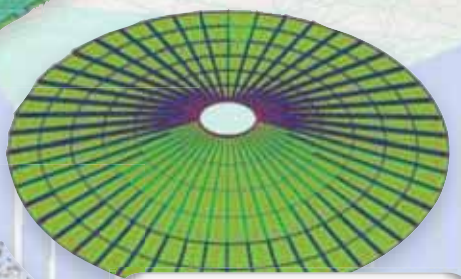
Air Canada Centre Courtesy of Yolles Partnership



Kuala Lumpur Convention Centre
Courtesy of The Bonacci Group

Reinforced Concrete Slab Design





User Defined Coordinate System and Automatic Area Load Distribution

Wearmouth Bridge
Courtesy of Sunderland City Council

- Automatic one or two way spanning area load distribution.
- Free-body forces tool for calculation of storey shears.
- Automatic calculation of notional loads and storey drift to aid with code-compliance.
- Wall integration lines for automatic calculation and easy output of FE-modeled shear wall forces, which can be exported to wall design and detailing software like S-CONCRETE™.
- Powerful FE slab designer supporting various building standards.
- Integrated Structural Steel Design using S-STEEL™ and Reinforced Concrete Design using S-CONCRETE™.
- 3rd party product integration – TEDDS®, Tekla® Structures, Autodesk® Revit®, 3D+™, Orion™, Bentley Structural™, ProSteel 3D and more.
- Import from and export to AutoCAD® via DXF files.
- Export to Microsoft Word® and TEDDS®.
- Fully functional spreadsheet input/output (copy/paste).
- Generate Virtual Reality Modeling Language (VRML) compatible files for 3D viewing.

www.s-frame.com

Complete your SOFTEK Structural Office Suite with S-STEEL (Integrated Steel Design) and S-CONCRETE (Integrated RC Design).
Please visit our website at www.s-frame.com or call us for additional information.

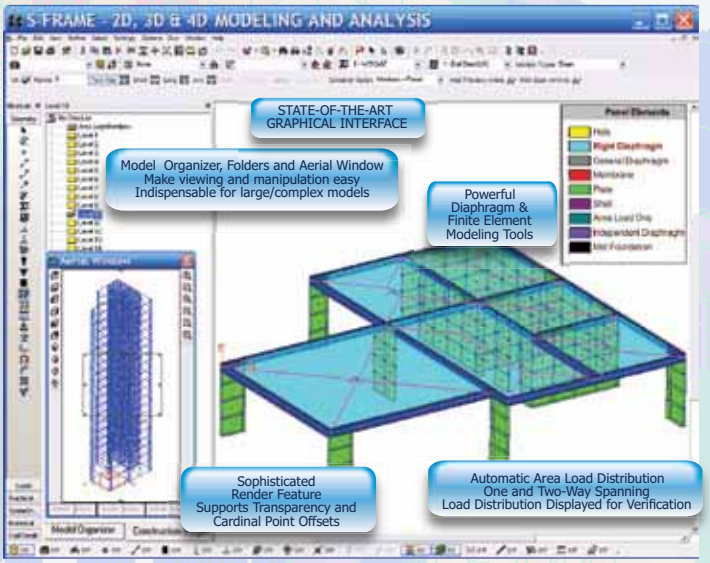
P-FRAME® and S-FRAME®

Simple 2D Elastic Analysis to 3D Advanced Non-linear FE Analysis

SOFTEK STRUCTURAL OFFICE

Standard Edition (S-FRAME and/or P-FRAME)

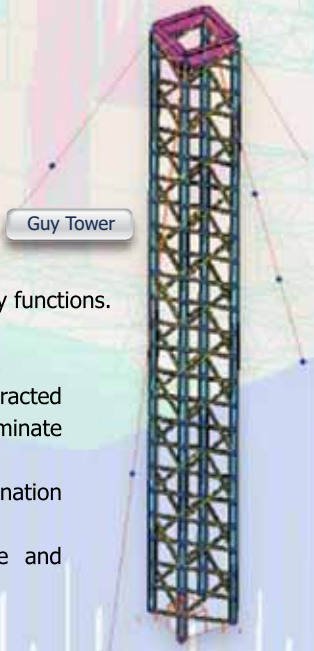
- Beam, truss, linear spring and inactive elements.
- 3 and 4 node plate, shell and membrane elements.
- Simple creation of panels (and holes) with automatic meshing and loading options.
- Rigid and flexible diaphragm modeling.
- Support for rigid offsets.



Professional Edition (S-FRAME and/or P-FRAME)

In addition to Standard Edition:

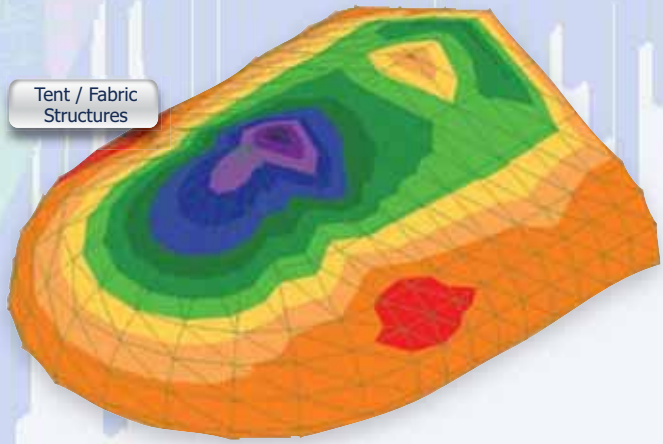
- Buckling analysis.
- Stressed and unstressed vibration (eigenvalue) analysis.
- Mode shape/deflection animation.
- P-Delta (2 cycle iterative) analysis.
- Time history analysis.
  - –Constant or variable time step.
  - –Import time history data.
  - –Force or acceleration & time history functions.
- Response spectrum analysis.
  - –Option to scale to code base shear.
  - –Dominant mode can be extracted and scaled to create statically determinate design combinations.
  - –Five different modal combination methods including CQC and SRSS.
  - –Spectra can be saved for reuse and merged.
- Moving load analysis.
  - –Multiple loads on multiple lanes.
  - –'Lanes' may follow any 3D path
  - –Influence line diagrams.
  - –Definable vehicle patterns.



Enterprise Edition (S-FRAME Only)

In addition to Professional Edition:

- Advanced non-linear static analysis using full Newton Raphson iterative solver with incremental loading.
- Non-linear moving load analysis.
- Sophisticated 3 and 4 node elements participate fully in P-Delta and non-linear analysis.
- Tension/compression only elements.
- True cable elements.
- Non-linear axial spring, non-linear torsional spring.
- Tension/compression only supports.
- Non-linear ground springs supporting gap characteristics and hook characteristics.
- Staged construction (4D analysis).



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