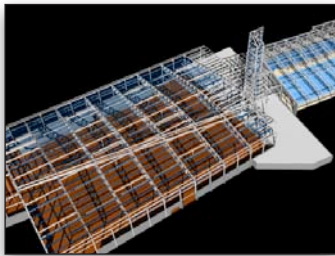




Structural Modeler V8i

Comprehensive Building Information Modeling (BIM) for Structural Engineering Design, Analysis, and Documentation

Structural Modeler V8i is a focused application for structural engineers, designers, and structural BIM practitioners. It offers simultaneous physical and analytical modeling for design, analysis, coordination, documentation, reporting, and visualization. In addition to these key features, Structural Modeler V8i provides the advantage of a bidirectional integration with leading analysis software. The end result is an engineering software application that provides significant opportunities to increase accuracy and efficiency while reducing time schedule and cost in complex multidisciplinary projects.



*Ithaca College Athletics and Events Center
(Courtesy Korda/Nemeth Engineering Inc)*

With an intuitive user interface, extensive libraries of structural components, and powerful tools for modeling, drafting, and reporting, Structural Modeler V8i supports all phases of the structural workflow, from the design and modeling of structural systems to structural analysis and construction documentation. Integrating design, visualization, drawing production, and reporting, Structural Modeler V8i is part of Bentley's BIM portfolio of integrated design, engineering, and management applications for the entire lifecycle of constructed assets. Used on large and complex projects around the world, Structural Modeler V8i was specifically developed to support workgroups and distributed teams in a managed environment, allowing architects, engineers, and contractors to work as a well coordinated inter-disciplinary team.

BIM enables business-critical benefits over traditional computer-aided drafting (CAD), eliminates waste, significantly reduces errors and omissions, provides greater predictability of costs and performance, allows exploration of more design options, and ultimately results in better buildings.

Structural Design and Information Modeling

A comprehensive range of dedicated tools support the design and modeling of structures in steel, concrete, and timber. Parametric components, such as walls, foundations, columns, beams, trusses, slabs, and bracings, allow dimension-driven creation and modification. Intersecting members are automatically coped or cut back from supporting members, and if necessary, rotated to the slope angle of their supports.

Choice of 2D, 3D, or Both

The building information model can be created and manipulated in a traditional 2D plan, an advanced 3D model environment, or both – using the same tools and interface for either.

Integration with Analysis and Detailing

Simultaneously with the physical members, an analytical model is created, to which boundary conditions, member releases, and various load combinations can be added. This finite element information integrates directly with leading structural analysis applications. Integration with steel detailing and concrete reinforcement software is supported via industry-standard exchange formats.

Rule-Based Drawing Production

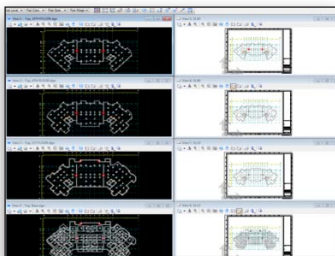
Plans, framing layouts, sections, and elevations comply with user-definable drawing standards and rules for resymbolization and annotation. Options are provided for single- or double-line representation, removal or display of hidden lines, and extensive labeling and annotation of structural members. Coordination and consistency is thereby assured across all documentation.

Integrated Schedules and Reporting

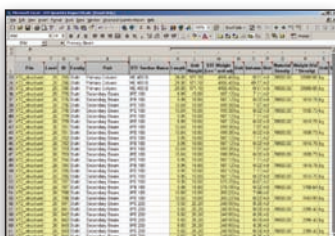
User-definable properties associated with structural members can be used to query the structural information model, to make selective or global changes to the geometry and nongraphical information, and to generate accurate component schedules that include lengths, volumes, weights, centers of mass, and more. Changes in Microsoft Excel spreadsheets, affecting attributes such as steel section size and height of single or multiple structural components, update both physical and analytical models.

A Managed Environment

Structural Modeler V8i can be integrated with ProjectWise, Bentley's project team collaboration server that manages access to project information across a LAN, WAN, VPN, or via the Internet, it and publishes and synchronizes shared information, manages change, protects intellectual



Detailed construction documentation



Member schedules including volume and weight calculations

System Requirements

Software:

MicroStation® V8i v8.11 or higher

Processor:

Intel® or AMD® processor 2.0 GHz or greater

Operating System:

Windows 7 [for MicroStation V8i SELECTseries 1]

Windows 7 (64-bit) [for MicroStation V8i SELECTseries 1]

Windows Vista (including Home Premium, Business, and Ultimate editions)

Windows Vista (64-bit)

Windows XP (including Home, Professional, and Media Center editions), SP2 or later

Windows XP Tablet PC Edition

Windows XP Professional (64-bit)

Memory:

512MB minimum, 2GB recommended. More memory almost always improves performance, particularly when working with larger models.

Hard Disk:

900 MB free disk space (which includes the 400 MB install footprint for a complete installation)

Video:

Graphics card supported by DirectX 9.0c

Find out about Bentley at:
www.bentley.com

Contact Bentley

1-800-BENTLEY (1-800-236-8539)
Outside the US +1 610-458-5000

Global Office Listings

www.bentley.com/contact

Structural Modeler V8i At-A-Glance

Building Information Modeling (BIM)

- Structural design and construction documentation for structures in steel, concrete, and timber
- Integrated analytical model with finite elements, nodes, boundary conditions and member releases, loads and load combinations

Parametric and Feature-Based Structural Design

- Dimension-driven creation and modification of structural components
- Automatic user-definable cutbacks and coping of intersecting members
- Support for many metric and imperial steel section tables (American, British, Asia-Pacific, European, Canadian, and more)

Coordinated Construction Documentation

- Plans, framing layouts, sections, and elevations created with extraction rules for resymbolization and member annotation
- Material-dependent hatching and patterning of cross sections
- Quantity takeoffs, member schedules, volume and weight analyses, and other reports
- Compatibility with office automation tools for further processing and formatting

International and Custom Standards Support

- Support of DGN, DWG, DXF, PDF, STEP, IGES, IFC, ISM, and other major industry standards

- Create, manage, verify, and enforce company and project standards
- Support for U.S. and other national CAD standards

Integration with Analysis and Detailing

- Import/export tools for interoperability with dedicated industry standards, such as CIS/2 and SDNF for structural design to fabrication.
- Interoperability between Bentley's STAAD.Pro V8i, RAM Structural System V8i, and Structural Modeler V8i engineering applications for efficient and accurate structural design, analysis, drawing production, quantification and project team coordination
- Interoperability with other structural analysis applications, such as MIDAS/GENw, Oasys (Arup) GSA and SFRAME
- Many typically required drawings are automatically generated from RAM Structural System V8i for plans, elevations and steel column schedules

Integration with Managed Environment

- Fully supported in Bentley ProjectWise, Bentley's comprehensive collaboration server

Visual Basic for Applications

- Wizards to create steel trusses, bar joists, handrails, columns with corbels, haunches, platforms, and other structural components

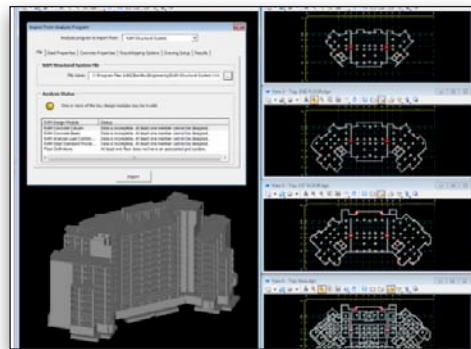
- Users are able to develop custom wizards and applications

Interoperability with Building Design, Engineering and Analysis

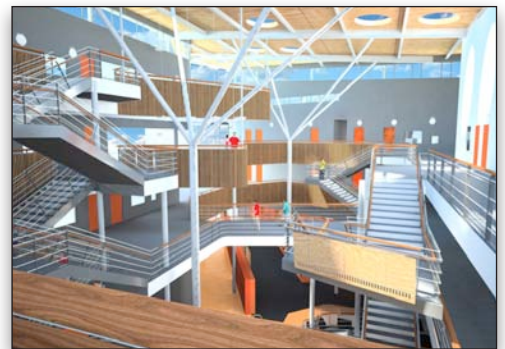
- Shared multidisciplinary model for team collaboration and coordination
- Integrated with Bentley Architecture V8i, Bentley Building Mechanical Systems V8i, Bentley Building Electrical Systems V8i, and more
- Review and manage interferences across multiple files and disciplines in conjunction with ProjectWise Clash Resolution Visa
- Simulated construction schedules in conjunction with Navigator V8i and project management applications, such as Microsoft Project or Primavera P3

Flexibility through Integrated Structural Modeling

- Facilitated by Bentley's newly introduced i-model (a container for open infrastructure information exchange), Integrated Structural Modeling maximizes the interoperability of structural information between different specialized applications, CAD and BIM platforms, and design reviews of a project's structural information
- Integrates with Revit Structure and Architectural models workflows (Revit 2009, Revit 2010, Revit 2011, 32-bit, and 64-bit versions)



Integration with finite element applications



Multidiscipline BIM
Teddington School, London
(Courtesy Building Design Partnership Ltd)