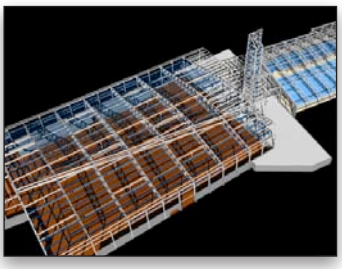
PRODUCT DATA SHEET

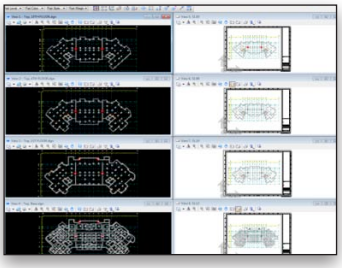
Structural Modeler V8*i*

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

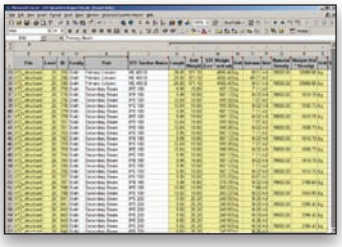
Structural Modeler V8*i* is a focused application for Structural engineers, designers, and structural BIM practitioners. It offers simultaneous physical and analytical modeling for design, analysis, coordination, documentation, reporting and visualization. In addition to these key features, Structural Modeler V8*i* 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)



Detailed construction documentation



Member schedules including volume and weight calculations

With an intuitive user interface, extensive libraries of structural components, and powerful tools for modeling, drafting, and reporting, Structural Modeler V8*i* 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 V8*i* 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 V8*i* 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 mani-pulated in a traditional 2D plan or an advanced 3D model environment – 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 ensured 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 V8*i* can be integrated with Bentley ProjectWise, a collaboration server that manages access to project information across a LAN, WAN, VPN, or through the Internet, and publishes and synchronizes shared information, manages change, protects intellectual property rights, and more.

System Requirements

Software:
MicroStation® V8*i* v8.11 or higher

Processor:
Intel Pentium-based or AMD Athlon-based PC or workstation

Operating System:
Microsoft Windows Vista, XP, Windows 98/2000, Windows 7

Memory:
128MB RAM

Hard Disk:
200MB minimum free diskspace

Input device:
Mouse or digitizing tablet (tablet on Windows requires WINTAB driver or Bentley's Windows Digitizer Tablet interface

Find out about Bentley at: www.bentley.com

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Structural Modeler V8*i* 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 others)

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 V8*i*, RAM Structural System V8*i* and Structural Modeler V8*i* 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 V8*i* 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

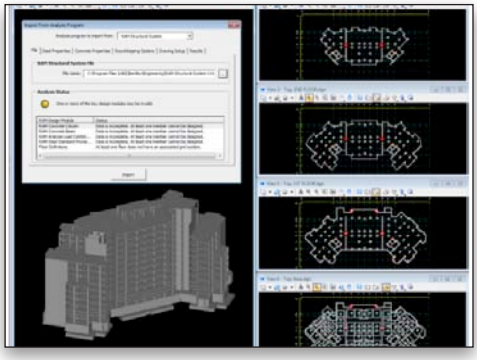
- Wizards to create steel trusses, bar joists, handrails, columns with corbels, haunches, platforms, and other structural components
- Users are able to develop custom wizards and applications

Interoperability with Building Design, Engineering and Analysis

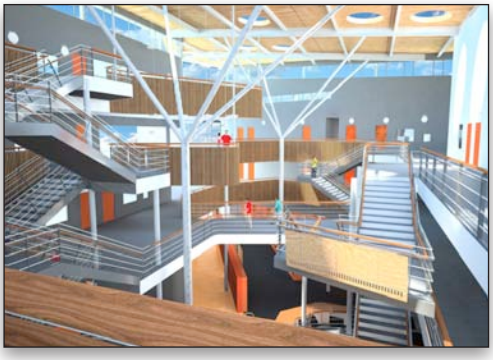
- A shared multidisciplinary model for team collaboration and coordination
- Fully integrated with Bentley Architecture V8*i*, Bentley Building Mechanical Systems V8*i*, Bentley Building Electrical Systems V8*i*, and more
- Review and manage interferences across multiple files and disciplines in conjunction with ProjectWise Clash Resolution Visa
- Simulated construction schedules in conjunction with ProjectWise Navigator V8*i* 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, 64-bit versions



Integration with finite element applications



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

Bentley
Sustaining Infrastructure