PRODUCT HIGHLIGHTS

ACRONYM SOFTWARE INCORPORATED
22 King Street South, Suite 302
Waterloo, Ontario, Canada N2J 1N8
Ph: 519.885.2454
Fax: 519.885.1407
soda@acronym.ca
www.acronym.ca

SODA performs least-weight design of standard steel sections. SODA operates under Windows® 9x, ME, NT, or 2000, provides graphical views of structure and loads, deformed shape, shear and moment diagrams and controlling design code clauses. SODA allows for the design, verification and analysis of a broad range of steel structures (2D & 3D frameworks, up to 2000 members & 1500 nodes & 100 load cases, multiple support & connection conditions, first-order & second-order behavior, etc.). SODA permits design and verification under five different American and Canadian steel design codes. SODA 4 is to be released in the Spring 2003.

ATIR ENGINEERING SOFTWARE
3314 West Rance Terrace
Chicago, IL 60712-3831
Ph: 800.644.6441 or 847.677.1945
Fax: 847.677.3456
strap@atir.com
www.atir.com

Product: STRAP Version 10.5 (STRuctural Analysis Program): Fully graphical 3D, static and dynamic, frame and finite element analysis and design program. Developed specifically to meet the demands of the Structural Engineer, STRAP’s pre and post analysis options speed and simplify data input and results interpretation. Comprehensive post-processors are available for rolled and light gauge steel, concrete, and composite sections designed to U.S (AISC, AASHTO-steel, ACI, AISI) Canadian, British and European codes. The powerful graphical interface of STRAP enables the user to define even the most complex models with only a few commands.

The light gauge steel designer of STRAP allows structural engineers to analyze and design light-gauge steel structures of any complexity. The user can define any shape of section to be used in the model design.

New features of Version 10.5 include: an option to produce a ‘General arrangement drawing’ for steel and concrete models; integration to the BEAMD system that details reinforced concrete beams and produces a beam schedule; and addition of the ASCE standard (ASCE7-98) for earthquake design.

Product: STRAP for Bridges: This module is intended for bridge engineers who design bridge structures of all shapes for moving loads. The program creates 3D influence lines for any point and calculates the critical effect of the vehicle loads.

BENTLEY SYSTEMS, INC.
685 Stockton Drive
Exton, PA 19341
Phone: 800.BENTLEY / 610.458.5000
Fax: 610.458.6284
family@bentley.com
www.bentley.com

Bentley’s structural for MicroStation TriForma optimizes MicroStation TriForma for structural design and construction documentation. Using parametric and solid modeling tools, structural engineers can create models of buildings, plants and other structures that contain both geometric and attribute information. Rule-based floor plans, sections and elevations, as well as quantity and cost reports, can be extracted from these ‘intelligent’ models, ensuring coordination of construction documentation and synchronization with the design.

SAM is design software for bridges that integrates analysis with code checking, increasing productivity for bridge design engineers.

The major features are: Analysis: Use line girder and distribution factors, analyze curved decks with grilles, or model complex structures with finite elements. Bridge Loading: Automated full 3-D load pattern generation from influence surfaces with unique benefits you won’t find elsewhere. In addition, the program produces a ‘General arrangement drawing’ for steel and concrete models; integration to the BEAMD system that details reinforced concrete beams and produces a beam schedule; and addition of the ASCE standard (ASCE7-98) for earthquake design.

BENTLEY SYSTEMS, INC.
195 University Avenue
Berkeley, CA 94704
Ph: 510.845.2177
Fax: 510.845.4096
info@csiberkeley.com

Computers and Structures, Inc., specializes in structural and earthquake engineering software. The products offered by CSI (SAP2000, ETABS and SAFE) cover a wide range of structural applications from high rise buildings to multi-use one- and two-story structures (industrial structures, hospitals) and bridges (suspension and cable stayed bridges, multi-span bridges) to transmission towers. For nearly three decades, CSI software has been used for the analysis and design of many major projects in over 100 countries.

C-CONCEPTS, INC.
12612 W. Mill Road
Menomonee Falls, WI 53051
Ph: 262.252.3173
Fax: 262.252.3134
sales@c-conceptsinc.com
www.c-conceptsinc.com

ERI Tower is a state-of-the-art analysis and design tool for the telecommunications industry. Designed specifically for telecommunications towers, this program automates the analysis and design required to meet the TIA/EIA-222-Standard. The program can analyze and design 3 and 4-sided guyed towers, 3 and 4-sided self-supporting towers, round or tapered monopoles and guyed monopoles. Wind profiles may be either the TIA or the ASCE 7 standards. Linear and non-linear (P-delta) analyses can be used in determining displacements and forces in the structure. Wind pressures and forces are automatically calculated, eliminating the need to consider “nodes and elements.”
**PRODUCT HIGHLIGHTS**

**Structural Engineering Software Products**

Extensive graphics plots include material take-off, plot plan, shear-moment, leg compression, displacement, twist, feed line, guy anchor and stress plots. Reports are generated in Microsoft Word rich text format.

**COMPUTATIONS & GRAPHICS, INC.**

6500 S. Dayton St., Suite B305 Englewood, CO 80111 Ph/Fax: 303.706.0048 info@cg-inc.com www.cg-inc.com

REAL3D-Analysis 2002 is a comprehensive structural analysis program that provides accuracy, reliability and ease of use to structural engineers. Elements include beam and truss, thin and thick plate bending, compatible and incompatible plane stress, shell and solid (brick).

**PRODUCT CASE STUDY**

Projects: Doncaster Viaduct

Darrington to Dishforth bridge

**STRUCTURAL ENGINEER:** Bullen Consultants (UK)

**SOFTWARE:**

SAM Bridge Design Software (by Bestech)

Bullen Consultants in the UK have been using the SAM integrated bridge design software for the past year on a number of bridge design and rating schemes. These vary from a 15-span, 2030'-long composite steel viaduct that uses a ladder deck construction in Doncaster (UK) to a number of ratings of multi-span, simply supported bridges on the Darrington to Dishforth (UK) project.

The Doncaster project involved an evaluation of the viaduct (on behalf of AMEC Civil Engineering Ltd). The viaduct consists of a two-girder, steel-composite structure that comprises 15 continuous spans, carries two 24'-roadways with 4' sidewalks and a 6' central reserve, and is supported on twin reinforced-concrete piers. All of the pier structures are supported on piled foundations.

The single continuous deck has a steel-composite construction with two main girders of 8' continuous depth, and cross girders spanning between at 12' centers. Formwork spanned longitudinally between the cross girders to support the cast-in-place concrete deck construction. Parapet units and copings were formed in concrete and followed the curve of the deck.

Spans varied with an average span length of 145'. The maximum span was 157' and the minimum was 78'. The viaduct crossed numerous obstacles including a river and a railway.

The bridge superstructure was checked using a SAM grillage to model the deck. Due to the horizontal layout of the viaduct, the structure was split into two separate models, with two of the spans from each model overlapping in the middle. This first grillage had a horizontal alignment on a radius of approximately 1310', with the second grillage modeling the straight section. This allowed SAM's 3D Live Load Optimizer to be used to rate the viaduct.

The bridge layout was defined using a SAM grillage to model the deck. Due to the horizontal layout of the viaduct, the structure was split into two separate models, with two of the spans from each model overlapping in the middle. This first grillage had a horizontal alignment on a radius of approximately 1310', with the second grillage modeling the straight section. This allowed SAM's 3D Live Load Optimizer to be used to rate the viaduct.

**Finite element models of the cantilevers to the parapets were also used to check the cantilevers for local and global effects.**

As part of the Darrington to Dishforth project, the Highways Agency required existing structures to be rated to meet current loading requirements. Ten structures on the scheme were rated using SAM. The bridges were modeled using the SAM graphical user interface for both model geometry layout and definition of the beams.

The bridge layout was defined using graphical tools for creating the design lines, carriageways, span-end lines and support conditions, from which the grillage meshes were produced. The previously defined beams were graphically associated with the grillage model, and the section properties used for analysis were calculated automatically.

Analysis of each bridge deck was carried out to determine the critical bending and shear diagrams for the members in the grillage model using the optimal load-placing tools in SAM. The results of the analysis were transferred to the integrated beam module where the beam sections were checked in accordance with the rating code. This resulted in a substantial saving in time by avoiding data transfer between programs.

“A typical, simply supported 40'-span bridge that would have normally taken four or five days to analyze and obtain design results can now be done in half a day,” said Paul Musgrave, Principal Engineer at Bullen Consultants, Durham, UK.
Structural Engineering Software Products

WinSTRUDL is a finite element program that analyzes 2D and 3D truss, frame, and plate structures under static and dynamic loads. It designs concrete, steel beam, column, and footing members according to ACI and AISC codes. A comprehensive graphic model generator enables you to draw, point, and click to define structure and loading with ease. A continuous beam program is also included for quick calculations. Apart from graphical input, you can also operate in the traditional STRUDEL format and submit data as a batch run. WinSTRUDL’s capability is unlimited and is known to solve more than 20,000 joints and 10,000+ load cases.

18-year-old WinSTRUDL is used by more than 2,000 consultants in 30+ countries. It is on sale for less than $600. Capability, options, ease-of-use, price and performance make WinSTRUDL the best value on the market.

CSC
P.O. Box 800129
Roswell, GA 30075
Ph: 678.277.9596
Fax: 678.277.9319
support@cscworld.com
www.cscworld.com

Innovative software for structural engineers. 3D+ provides totally integrated modeling, drawing, analysis and design. Use AutoCAD to create a complete structural model for analysis and design. Engineering design drawings generated automatically and updated to reflect changes. Saves time, reduces errors and improves coordination of design information.

S-FRAME for powerful 2D/3D analysis integrated with S-STEEL for comprehensive steel design. Using TEDDS it's simple to create and automate your own calculation sheets inside Microsoft Word—with no programming knowledge. Produce calculations that look like traditional engineering documents and can be revised at the click of a button. Unlike a spreadsheet, TEDDS includes a library of structural calculations and data e.g. ASD, LRFD, ASCE7-98, IBC2000. Fastrak Connect provides moment connection design. Products can be used independently or together for an integrated solution.

DAYSTAR SOFTWARE, INC.
8303 NW Hillside
Kansas City, MO 64152
Ph: 816.741.4310
Fax: 816.741.4607
info@daystarsoftware.com
www.daystarsoftware.com

Multiframe is a three-dimensional software system for linear or non-linear static or dynamic analysis of framed structures. Featuring fast, interactive graphics, Multiframe provides a completely graphical approach to structural modeling, analysis and detailed design.

Smooth direct data and graphics exchange with Excel, Visio, MathCAD, AutoCAD and others integrates Multiframe with your existing design tools. CAD tools such as automatic generation, duplication and rotation of structural elements simplify the process of constructing a frame model. The program includes clipping, masking and transparency functions that allow the user to interactively slice through the structure to view and highlight areas of interest. Searching and sorting functions also make it easy to find key design values and produce required reports.

DEVCO SOFTWARE, INC.
245 NE Conifer Blvd.
Corvallis, OR 97330
Ph: 541.426.5713
Fax: 541.426.5715
rob@devcosoftware.com
www.devcosoftware.com

LGBAMER—Software for the design of cold-formed steel framing (cee’s, zee’s and channels). Models single or multi-span members, including cantilevers, with flexural and axial loads. Analyze single, boxed, back-to-back or ‘built-up’ members using the AISI “Specification for the Design of Cold-Formed Steel Structural Members.”, including the 1999 Supplement. Input section geometry in drop-down style from industry standard and manufacturer databases, or build custom sections. Complete flexibility of bracing intervals, including sheathing braced design where allowed by the Specification. Metric and English Units. Only $375.

D-Coder: Tabulates wind pressures in accordance with IBC 2000 (ASCE 7-98) and the 1997 UBC for both MWFRS and Elements and Components. Determines seismic coefficients for base shear, and elements and components in accordance with 2000 IBC and 1997 UBC. Also tabulates dead, floor live and roof live/snow loads as well as deflection limits.

DIGITAL CANAL CORPORATION
(formerly a division of Eagle Point Software)
2728 Asbury Road
Dubuque, IA 52001
Ph: 800.449.5033
Fax: 563.690.2003
sales@digitalcanal.com
www.digitalcanal.com

Structural Expert Series (SES) by Digital Canal: Digital Canal provides a software suite encompassing your entire project needs including analysis, design and detailing. Our modules are easy to learn and use. Their power and flexibility will surprise you! The cornerstone of the SES series is our Frame Analysis & Design product, which runs stand-alone or integrated within AutoCAD. This powerful, flexible and easy to use analysis and steel design program utilizes CAD to model, analyze, and design structures, giving it unequalled graphics capabilities and providing a swift and significant return on investment.

Also available inside AutoCAD or AutoCAD LT is StrucPro. Inexpensive and efficient are the keys to this 2D detailing and drafting program. Additional productivity enhancing products include: Steel Design, Spread Footing Design, Wind Analysis, Timber Design, Multiple Load Footing Design, Retaining and Masonry Wall Design. Free evaluation CD and bundle pricing available!
PROJECT HIGHLIGHTS

Structural Engineering Software Products

DLUBAL ENGINEERING SOFTWARE
Am Zellweg 2
Tiefenbach, D-93464, Germany
Ph: +49.9673.9203.23
Fax: +49.9673.1770
info@dlubal.com
www.dlubal.com

RSTAB is a 3D structural analysis software package for the design of steel, timber and concrete structures. RSTAB is outstanding in its graphic user interface and allows easy modeling and handling of complex structures. RSTAB includes free editable factored load combinations, linear and non-linear analysis methods, stress analysis including section properties and warping for any thin-walled sections, moving loads, dynamic analysis including (UBC and IBC), buckling analysis and more. Design modules are available for steel, timber and concrete structures. RSTAB can be controlled externally by a programmable COM interface (e.g. Visual Basic). Import and export to ProSteel3D and XSTEEL is included. RSTAB allows visual modeling of structures by using methods like Drag & Drop, navigation trees and spreadsheets. The analysis results are presented in a customizable report including images and user graphics. More information and demo versions are available for download at www.dlubal.com.

DR. SOFTWARE, LLC
5123 47th Ave NE
Seattle, WA 98105
Ph: 206.524.8683
Fax: 425.952.1664
sales@drsoftware-home.com
www.drsoftware-home.com

Dr. Software, LLC specializes in the development of real-time structural modeling software for engineering and architectural professionals and students. Our products feature unique direct manipulation modeling capabilities embedded within rich environments that allow users to concentrate on behavior rather than details of the user interface. As a result, modeling can become an exploratory activity rather than a bookkeeping task. There is no distinct pre- or post-processing—everything happens in real time. Our structural products include:

- Dr. Beam Pro: a direct manipulation environment for beam modeling and Dr. Frame: a direct manipulation environment for modeling truss and frame structures. Free demo versions can be downloaded from the Dr. Software web site. Educational pricing available.

GT STRUDL
Georgia Tech - CASE Center
790 Atlantic Drive
Atlanta, GA 30332-0355
Ph: 404.894.2260
Fax: 404.894.8014
casec@ce.gatech.edu

For nearly three decades, GTSTRUDL has been regarded as the most reliable, accurate, and powerful structural engineering software solutions available. GTSTRUDL is a database driven system with integrated features for linear and nonlinear, static and dynamic frame, and finite element analysis, steel and concrete frame design, and offshore jacket analysis and design. GTSTRUDL covers applications from high-rise buildings to industrial structures, long-span bridges to transmission towers, and sports structures. RISA-3D can be controlled externally by a professional COM interface (e.g. Visual Basic). Import and export to ProSteel3D and XSTEEL is included. RISA-3D allows visual modeling of structures by using methods like Drag & Drop, navigation trees and spreadsheets. The analysis results are presented in a customizable report including images and user graphics. More information and demo versions are available for download at www.dlubal.com.

PRODUCT CASE STUDY

Project:
Bard College Performing Arts Center, Annandale-on-Hudson, NY

STRUCTURAL ENGINEER:
DeSimone Consulting Engineers, P.L.L.C.

SOFTWARE:
RISA 3-D

Bard College’s new $24-million performing arts center will house opera, dance, and orchestral productions and the campus’ theatrical teaching facilities. The exterior of the buildings will showcase Frank Gehry’s metal “skin” design. Computer-generated curves define a form to which thin stainless steel sheathing follows. Behind the “skin” will be custom-built steel members placed at 10’ increments. The shape of each piece has been defined by the architect in a 3-D modeling packaged called CATIA, and will be translated and imported into advanced plate-cutting machines.

RISA-3D was an integral part in the analysis and design requirements of the project. It was used to design the typical back-of-the-house steel structure, and the curved steel members and bracing system that support the metal exterior enclosures.

“We could spend a large sum of money to purchase the design package that CATIA offers, and then have no one who could use it,” said Stephen V. DeSimone, P.E., executive vice president of DeSimone Consulting Engineers, P.L.L.C. of New York City, NY. “Instead we chose to invest in a more economical design package that everyone in our office can operate - RISA-3D. The trick is how to convert the geometry to RISA-3D.”

DeSimone Consulting Engineers solved this problem by developing a proprietary software program that translates spatial points between the two programs. “We create hundreds of geometry defining points that are then easily imported into RISA-3D,” said DeSimone project manager Chris Cerino. “With that starting point, the structure is easily defined using RISA-3D’s graphical interface.”

Cerino says that the project illustrates the versatility of RISA-3D. “It easily handled everything from concrete slabs to curved steel beams,” he said.
Structural Engineering Software Products

Microsoft Office style menu, and integrated context sensitive help to make it easy to use. Analyze just about any structure and design members, frames and trusses in steel, wood, concrete, and cold-formed steel. Also provides tools for base plate and footing design, load generation, smart preliminary member sizing and more. A free trial version is available.

ShapeBuilder 3.0: Single License Price:$395. ShapeBuilder 3 provides structural and geometric properties for built-up and custom sections. It calculates area, moment of inertia, section modulus, and many more properties. ShapeBuilder 3 leverages an extensive shape library and provides easy ways to create many common shapes-like reinforced concrete or composite steel sections.

ShapeBuilder goes beyond most simple section calculators by providing advanced engineering analysis of members: stress contours, reinforced concrete interaction diagrams, and torsional analysis. It also offers a CAD-like interface for graphical creation and manipulation of shapes. Shapes can be exported to almost any program including VisualAnalysis and AnalysisGroup.

AnalysisGroup 2.5: Single License Price:$495. AnalysisGroup analyzes six typical structural problems: circular tanks, shear wall systems, beams on elastic foundations, rectangular mat footings, plate bending, and continuous beams. You provide the geometry, boundary conditions and loads, while the software does all the hard work of making FE models. You get streamlined data entry, interactive graphics, and presentation quality reports. This program also works inside MathCAD and MS Excel!

FrameWorks Plus 7.2 (US$4200) is integrated structural software that produces intelligent models and comprehensive fabrication and detailing data packages; engineers use model data for physical members, accurate material takeoffs, and realistic project reviews in 3D. Supports 3D modeling and drawing, fabrication and detailing of beams, columns, braces, cutouts, sleeves, and concrete slabs and walls as well as offshore marine structures including rig jackets and floating platforms. SDNF and CMCcompliant, FrameWorks Plus runs on Microsoft Windows NT. Provides certified interfaces to GT-STRUDL, LARSA, STAAD-Pro, SAP2000, RAM Steel, X-steel, SDS/2, StruCAD, CDS. Features a comprehensive library of AISC and BCSA tables and standard section data from 15 countries.

INTEGRATED ENGINEERING SOFTWARE, INC.
519 E Babcock ST
Bozeman, MT 59715
Ph: 800.707.0816
Fax: 406.586.2665
info@iesweb.com
www.iesweb.com

VisualAnalysis 5.0: Single License Price: $395 - $1835. VisualAnalysis 5.0 is a very simple tool for doing everyday structural analysis and design. The new Advanced level product provides time-history analysis, cable elements, semi-rigid (PR) connections and incredibly fast analysis. Just sketch the model, define properties and apply loads graphically. Many ways to build models: text-file, DXF import, sketch, parametric generation, spreadsheet, and copy & paste! Create professional reports, and full-color diagrams.

VisualAnalysis has the features you need, a
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**KING & ASSOCIATES LLC**
111 Piping Rock Drive
Houma, LA 70363
Ph: 888.844.9608
Fax: 985.872.3145
usa@spacegass.com
www.spacegass.com

Space Gass is a general purpose structural analysis and design program for 2D and 3D frames, trusses, grillages, beams, etc. It features a graphical user interface that allows you to input, edit and monitor your entire structural model graphically. Of course, input via datasheets, text files and a structure wizard are also available.

Space Gass employs a state-of-the-art wavefront matrix solver enabling lightning fast solutions. Solvers for linear and non-linear static analysis, dynamic frequency analysis, dynamic response spectrum analysis and buckling analysis are available. It even includes a specialist cable element that models the catenary action of cable members in guyed masts, cable nets and the like. Most international design codes are supported including AISC-LRFD and AISC-ASD.

**MARSHALL ENTERPRISES, INC.**
6203 Timber Trail Drive
Meridian, MS 39305
Ph: 601.737.4260
Fax: 601.737.4261
mei@meisteel.com
www.meisteel.com

Can’t find estimating software that suits your needs? We couldn’t either. That’s why we developed MEI Steel Estimating Software. Designed by a steel estimator for steel estimators, MEI Steel Estimating Software is a powerful, yet easy to use, tool for estimating the costs associated with steel fabrication projects regardless of size. The software leads the estimator through the steps necessary to produce a complete and accurate estimate while targeting desirable ratios, profit margins, etc. There is even an automated audit function to identify potential omissions, inconsistencies or errors that may be present in the estimate. Once the estimate has been completed, the software automatically generates the project’s scope of work. Visit our website to view the guided tour of the software’s capabilities and try a fully-functional trial version free for 15 days.

**MIDASOFT INC**
1770 Barnes Blvd SW - Suite 200
Tumwater, WA 98512
Ph: 360.753.5540
Fax: 360.753.5542
dgreen@MidasUser.com
www.MidasUser.com

**OMNITECH ASSOCIATES**
P.O. Box 20792, Oakland, CA 94620
Ph: 510.658.8328 or 888.8.DECON
Fax: 510.595.0373
omnitech@desconplus.com
www.desconplus.com

DesconWin and Descon Brace programs are used to design connections of steel structures. ASD and LRFD versions of both programs are available. DesconWin designs shear and moment connections. Beam-to-column flange, beam-to-column web, and beam-to-girder connections as well as beam and column splices are designed using DesconWin. Column splice alternatives include direct welding, butt plate, welded/bolted flange plates and welded/bolted web plates. Column splice is designed for combined compression, moment, tension, and shear. Design of column web stiffeners and doubler plates are included in DesconWin.

Descon Brace designs vertical bracing connections including connections of Knees and K-Braces. Descon Brace has been expanded to include brace connections to column base and V-brace connections. Gusset plate to column connection options include direct welding, bolted/welded single plate, and bolted/welded clip angles. Connections to HSS columns have been implemented in recently released Descon Brace 3.1. Both programs generate detailed calculation reports, drawings and DXF files.

**OPTI-MATE, INC.**
P. O. Box 20923
Lehigh Valley, PA 18002
Ph: 610.867.4077
Fax: 610.865.1030
optimate@enter.net
www.opti-mate.com

**DESCUS** performs analysis, design, code check and ratings for curved (and straight) steel girder bridges in English or Metric units. Program complies with latest AASHTO Curved Girder Guide Specifications for WSD and LFD. No LRFD specification exists for curved girders. However, LRFD loading cases may be run. Features included: “I” and box girders, rolled shapes, shear connectors, stiffeners and composite action. A new feature includes a Microstation input data processor. Free 15-day trial.

**MERLIN DASH** performs analysis, optimum design, rating and code check for WSD, LFD.
and new LRFD. All live load functions calculated using live load generator. Multiples of HS and user-defined vehicles may be run concurrently.

Inventory, Operating, and Posting Ratings are automatically determined. Includes “I” girders, rolled shapes, variable depth web, shear connectors, stiffeners, auto-bolted splice design, composite action, slab pour sequence analysis, integral abutments and settlements. Free 15-day trial.

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5225 Avenida Encinas
Carlsbad, CA 92008
Ph: 800.726.7789 or 760.431.3610
Fax: 760.431.5214
sales@ramint.com
www.ramint.com

The RAM Structural System – Includes RAM Steel, RAM Concrete, RAM Frame and RAM Foundation, providing complete integration of the analysis, design and drafting for buildings and their foundations. Also available are Special Seismic Provision Checks for Steel and a Drift Control Module based on energy theories. Version 8.0 has just been released, containing many new modeling, productivity and design features.

RAM Advanse – RAM Advanse is a full-featured 3D finite element analysis and design tool, suitable for almost any type of structure, with design capabilities for wood, steel, cold-formed steel and concrete, and includes integrated footing design. RAM Connection – Steel connection design software, running either in stand-alone mode or completely integrated with RAM Advanse or the RAM Structural System.

RAM Perform – RAM Perform 2D and 3D are advanced software products for non-linear and pushover analysis and design. Written by Dr. Graham Powell, Professor Emeritus of the University of California at Berkeley and author of the industry standard DRAIN-2Dx, RAM Perform includes the most recent advances in push-over analysis and design.

RAM Design Productivity Tools – Includes RAM SB Beam for the analysis and design of steel composite and non-composite beams, RAM SC Column for the design of steel wide-flange, tube, and pipe columns, and RAM Base Plate, for the design of steel base plates and anchors.

SAFI QUALITY SOFTWARE INC.
3393 Ch. Sainte Foy
Sainte Foy, QC Canada G1X 1S7
Ph: 418.654.9454
Fax: 418.653.9475
info@safi.com
www.safi.com

Safi 3D Structural Office Software is an integrated structural analysis, verification, evaluation and design program for the buildings, bridges, bridges, transmission towers, electric sub-stations, tubular transmissions structures and more.

SAFI is powered by state-of-the-art analysis, evaluation and design techniques and equipped with a user interface. For analysis SAFI includes linear and non-linear capabilities, seismic, modal, dynamic analysis and finite elements. Productive features such as tension or compression members and springs, surface area loads with automatic redistribution, physical member concept for analysis and design, with model generation using parametric technology, and model editing using graphical selection techniques.

The Steel Calculator and Concrete and Footing calculators allow you to view, design, and optimize steel beams, columns, and critical concrete sections and footings in seconds.

January 2003 • Modern Steel Construction
PRODUCT HIGHLIGHTS

Structural Engineering Software Products

For Steel SAFI supports the LRFD, ASD, Canadian codes CAN CSA –S16.1 and CSA S6-2000, and the European EC-3 code using standard AISC, CISC or European sections or parametric sections shapes. Design optimization and automatic section selection features make economic structures a reality.

Data exchange supports AutoCAD interface by way of DXF file, Structural Modeler, SDNF (Steel Detailing Neutral File), KISS and also interfaces to FrameWorks, X-Steel and SDS 2.

Results can be visualized either graphically or numerically. Reports are available in several formats including SAFI Crystal reports, Excel, Access and ASCII text files. All graphics can be printed or copied to the clipboard for use in external programs. The end user can purchase the whole SAFI Structural Version or the application of choice.

STAT-EASE, INC.
2021 E. Hennepin Ave., Suite 480
Minneapolis, MN 55413-2726
Ph: 612.376.9449
Fax: 612.376.2152
info@statease.com
www.statease.com

Stat-Ease, Inc. provides statistical software, training and consulting services. Its mission is to put the power of statistics into the hands of scientists, engineers and quality professionals. Stat-Ease produces two top-rated PC packages for design of experiments (DOE):

Design-Ease–helps make breakthrough discoveries. Wizards make it easy to set up two-level factorial, general factorial, fractional factorial and Plackett-Burman designs. The program also provides simple one-way designs. A point and shoot interface with progressive toolbar icons leads the user to statistically valid predictive equations. Graphics simplify (continued) analysis at every step.

Design-Expert–includes all of the features of Design-Ease plus powerful DOE's for process optimization including three-level factorials, central composite, Box-Behnken and d-optimal designs. The program also offers mixture experiments including simplex, extreme vertices and d-optimal designs; combined mixture/process designs plus screening for up to 24 components. Rotatable 3D response surface maps (RSM) lead experimenters to the peak of performance. Design-Expert then uses sophisticated multiple response optimization routines to find the "sweet spot" that meets all specifications. You'll find 30-day free trials of both software packages at www.statease.com.

STEEL STRUCTURES TECHNOLOGY CENTER, INC.
24110 Meadowbrook Rd, Ste 104
Novi, MI 48375
Ph: 248.893.0132
Fax: 248.893.0134
rshaw@steelstructures.com
www.wps-designer.com

WPS Designer, a new software program for developing and evaluating welding procedures, is now available from the Steel Structures Technology Center. The program creates and evaluates Welding Procedure Specifications in accordance with the requirements of the AWS D1.1.2002, Structural Welding Code-Steel.

WPS Designer facilitates the technical analysis, design and approval of Welding Procedure Specifications (WPS's) and Procedure Qualification Records (PQR's) using AWS D1.1.2002, with pre-qualified groove welded joint configurations, base-metal data and filler-metal information, built-in preheat tables and PWHT requirements, complete welding-cost estimating functions, and storage/retrieval of WPS's and PQR's, all with fully interactive Windows interfaces.

Unlike many other welding software programs that require the user to research and input welding parameters into a database format, WPS Designer provides suggested operating parameters and performs calculations enabling the user to verify and adjust the WPS's as needed.

STRUCALC 5.0
P.O. Box 1617
Corvallis, OR 97339
Ph: 503.757.1353
Fax: 503.757.1354
strucalc@strucalc.com
www.strucalc.com

StruCalc 5.0 for Windows is one of the most intuitive programs available for the design and analysis of light commercial and residential structures. The design package includes 10 modules that can be used to design multi-span beams, joists, rafters, hip beams, laterally loaded columns, rectangular footings, and continuous footings. The built-in material database includes values for solid sawn lumber, glu-lam's, l-joists, structural composite lumber, tube steel and wide flange steel. It supports all of the major U.S. building codes including the 2000 IBC. Only $395.00 plus s/h.

ROBOT Finite Analysis and Design Software for Structural Engineering is built exclusively on Windows technology and is compatible with Windows 95/98/NT/2000.

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5375 Pare Street, Suite 201
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Fax: 514.341.8856
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537 Wisteria Drive
Radford, VA 24141
Ph: 540.731.3330
Fax: 540.639.0713
tmmurray@floorvibe.com
floorvibe.com

FloorVibe is Windows-based software for the analysis of floors for annoying vibrations. FloorVibe uses the criteria in the AISC Design Guide 11 Floor Vibrations due to Human Activity. Floors can be evaluated for walking in offices, residences, churches, and shopping malls; rhythmic activities like aerobics and lively dancing; and the effects of motion on sensitive equipment. FloorVibe has databases for hot-rolled sections, Smart beams, and K-series joists, and calculation procedures for LH- and DLH-series joists, joist-girders, and built-up sections. FloorVibe produces a complete design report with all calculations for ease in checking, FloorVibe also provides on line expert advice. Technical assistance is also available by phone, fax, or e-mail.

TUBE GROUP
University of Toronto
Department of Civil Engineering,
University of Toronto
35 St. George Street
Toronto, Ontario M5S 1A4, Canada
Ph: 416.978.4776
packer@ecf.utoronto.ca

HSS_connex is a program dedicated to designing Hollow Structural Section (HSS) truss connections and is a complement to existing written guides such as the AISC HSS Connections Manual. The scope extends to welded T, Y, K (gap and overlap) and KT truss connections, including webs with flattened ends, multiplanar connections, double chord connections, bolted flange-plate connections and many more special cases. Full databases of cold-formed, round, square and rectangular HSS members are included for both the ASTM A500 specification (with AISC-specified section properties) and the CSA specification, for any tube grade produced. The program works on all Windows platforms (Win95 and up), operates in either imperial or metric units, and Version 1.04 (2002) is now available.