NEMETSCHEK
Vectorworks

What's New in
Vectorworks 2009

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Please refer to this guide on the right to find out what features are in your Vectorworks product.

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Realize your most inspired visions with Vectorworks 2009.

After all, you inspired its design. It's flexible, so you have the freedom to design the way you want. It's versatile, so you can create, model, and present easily and precisely with one application. It's intuitive, so it works the way you think. It's a smart investment, that's affordable, customer-focused, and proven worldwide.

Image courtesy of Richard Gue, Inspired by Eiji Shibata of TEKO Design, Japan

What's New in Vectorworks 2009

You wanted better, faster, and more powerful. Well, you got it! Meet Vectorworks 2009—inspired by you and powered by Parasolid®, our new engine. Our 2D has always been superior; with Parasolid we've raised the bar. Our 2D is even better, and our 3D is best-in-class. Vectorworks is flexible, so you have the freedom to design the way you want. It's versatile, so you can create, model, and present with one application. Flex your modeling might. Easily prepare breakthrough presentations. Best of all, you can count on Vectorworks to help you take your designs to the next level, precisely document and communicate your ideas, and improve your business.
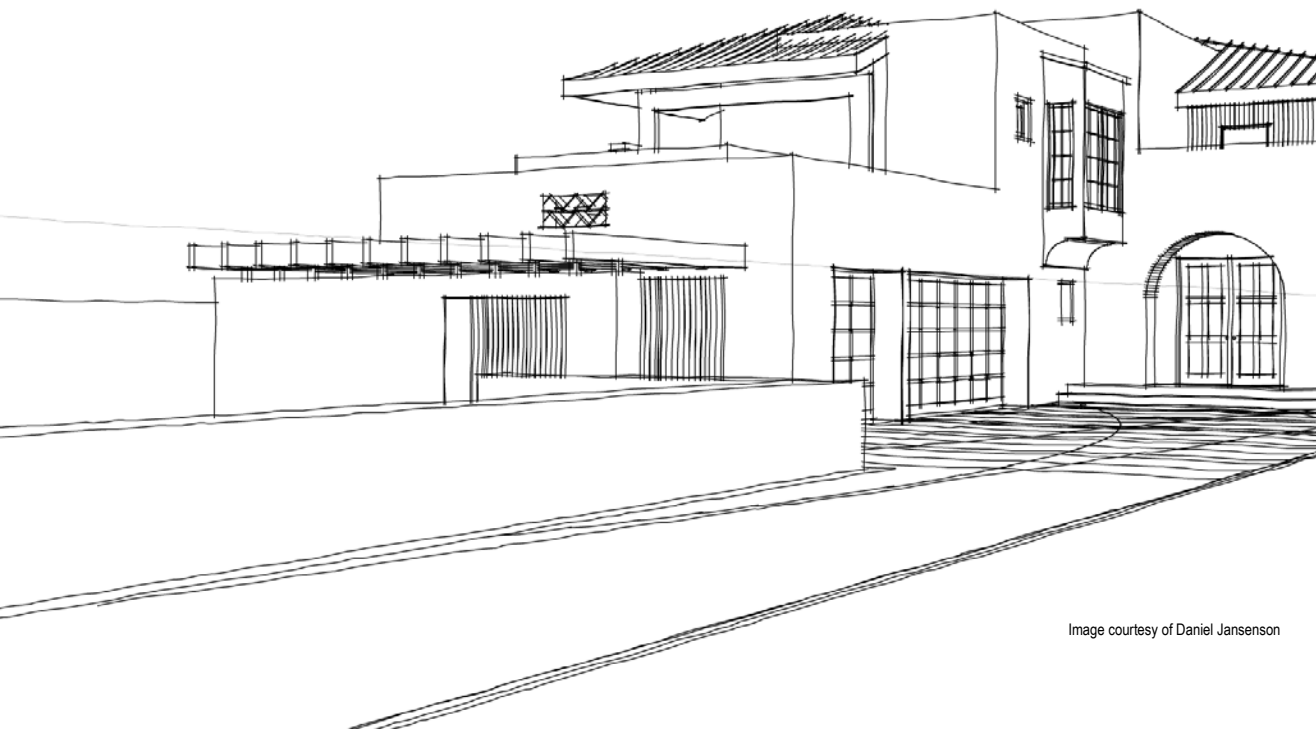
Image courtesy of Daniel Jansenson

What is Parasolid?

Parasolid® is simply the best 3D modeling kernel technology available today. Built by Siemens PLM software, Parasolid has unsurpassed 3D modeling capabilities—it can handle larger and more complex models, support higher levels of modeling automation, manage data accurately and consistently, and provide the interoperability needed to facilitate the seamless exchange of 3D data.

The embedded Parasolid kernel provides Vectorworks users with high performing, extremely stable, digital representation technology, which is applied across the design lifecycle.

Used as the foundation for hundreds of computer-aided design, manufacturing, and engineering analysis (CAD/CAM/CAE) applications, there are over 2.5 million end-user seats of Parasolid-enabled applications in use today.

Why Parasolid and Vectorworks?

Already an industry leader in 3D modeling, with its unique ability to support free-form modeling, Nemetschek North America licensed and incorporated the Parasolid kernel—to transform its Vectorworks application into the best in 3D. Together the Vectorworks and Parasolid combination provide the industry with the most scalable, reliable, and feature-rich 3D design application available today. With Parasolid at its core, Vectorworks enables you to model any geometry you can visualize. If you can imagine it, Vectorworks with Parasolid can represent it.

Productivity

Do more, period. New tools and improvements like similar object creation and navigation controls will give your productivity a real boost.

Similar Object Creation
□ A L S D M □

Here's a handy way to create an object that matches one already in a drawing. With a simple command, the right tool, mode, attributes, and parameters are automatically set to match the source object.
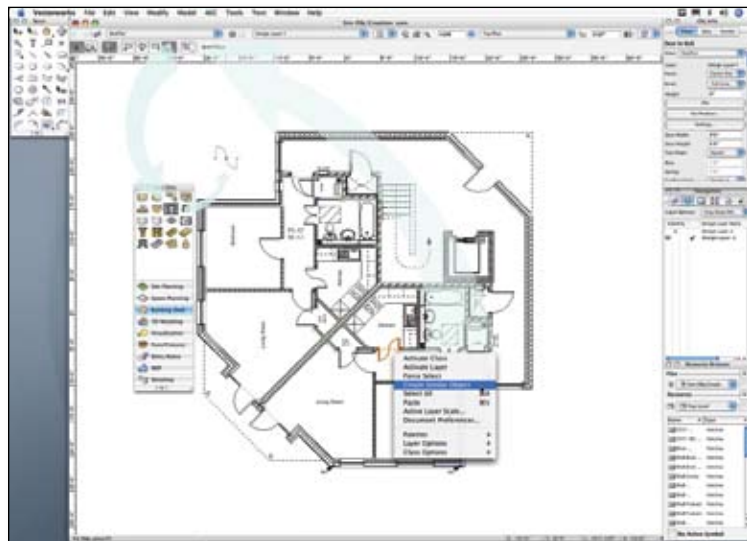
Landscape Area
□ □ L □ D □ □

There's no need to draw generic plant groupings or calculate landscape areas. Now, you can specify mixed planting areas that are calculated with specific plants included in your plant lists, gaining you valuable time. Conceptualization and analysis is made easier by subdividing sites for proposed uses—from small residential to large, mixed-use master plans. And, the ability to assign cost to areas will make project budgeting even faster.

### Reference Point Mode for Move by Points Tool
F A L S D M □

Set the position of a symbol in a wall by using two reference points and a specified offset distance.

Move Command for Symbols in Walls
F A L S D M □

Moving symbols within walls just got more intuitive. You can move symbols within straight or round walls by specifying an offset value. A handy preview image shows the direction the symbols will be moved in the wall, and allows you to flip direction with the click of a button.
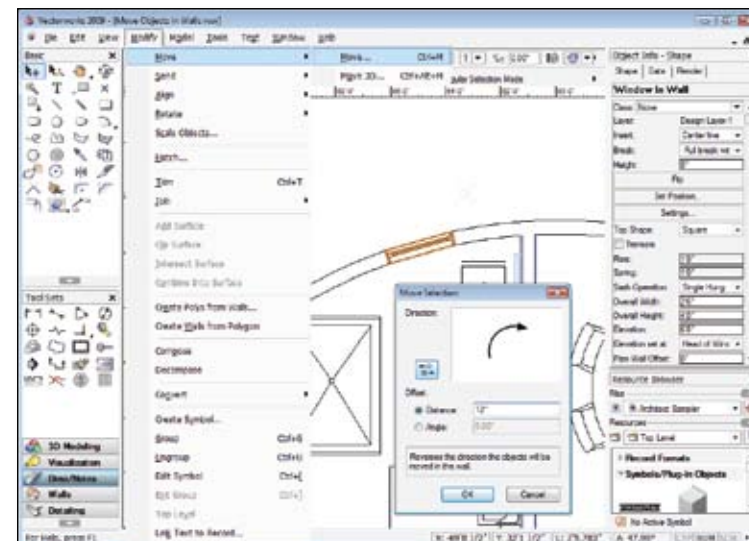
Move Command for Symbols in Walls

### Navigate Back to Design Layer Viewport from Design Layer
□ A L S D M □

Sometimes you need to make a quick change to a design layer from a viewport, so we've provided navigation between design layer viewports and design layers.
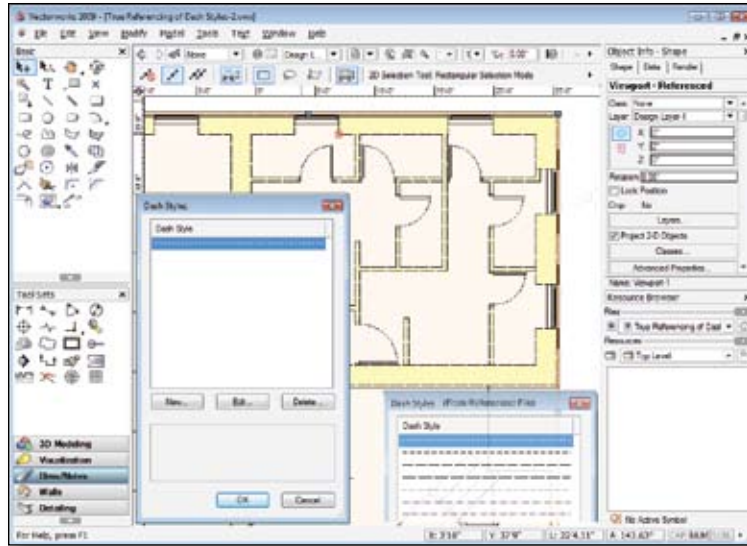
Reference Deletion Improvements for Design Layer Viewports
□ A L S D M □

For referenced design layer viewports, when you delete the reference to the source document, you can now optionally keep the referenced layers and resources in the target document; duplicate resources between documents are no longer imported.

Similar Object Creation
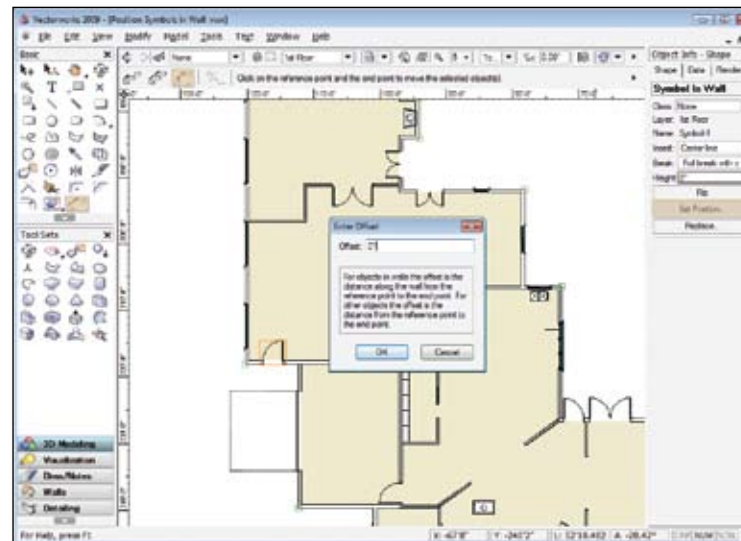
Reference Point Mode for Move by Points Tool

True Referencing of Dash Styles for Design Layer Viewports

Improved Offset Insertion Mode for 2D Symbol Insertion
F A L S D M ☐

A new 2D Symbol Insertion mode allows you to specify an exact point on a symbol when offsetting it, and supports angular and linear offsets for objects inserted in round walls.

Improved Offset Insertion Mode for 2D Symbol Insertion

Productivity

True Referencing of Dash Styles for Design Layer Viewports
☐ A L S D M ☐

Dash styles used by referenced objects or resources are no longer imported automatically, so you can keep your dash styles intact.

Eyedropper Support for Design Layer Viewports
☐ A L S D M ☐

In complex designs, we provide the ability to transfer attributes between design layer viewports.

Retain Design Layer Viewport Overrides in Sheet Layer
☐ A L S D M ☐

A new option was added to sheet layer viewports to show design layer viewport overrides in your sheet layer viewports. This improves the interaction between design layer and sheet layer viewports, so you can create great presentations.

Duplicate Array Command for Symbols in Walls
F A L S D M ☐

Now you can insert symbols into straight and round walls with the Duplicate Array command.

Eyedropper Support for Design Layer Viewports

Productivity

Create Joist from Poly Command Improvements
☐ A ☐ ☐ D ☐ ☐

Specify the property and attribute sets for the joists and the perimeter framing elements, including the length of joists relative to the perimeter and the desired corner joining for the perimeter framing. Framing member objects are placed directly on the drawing, allowing easy adjustments to their properties after the command has been run.

Roof Framer Improvements
☐ A ☐ ☐ D ☐ ☐

The Roof Framer provides the ability to treat the roof object as a roof deck (where the tops of rafters match the bottom of the roof), specify purlins on top of rafters, or have purlins sloped to match the roof slope.

Automatic Universe Assignment
☐ ☐ ☐ S D ☐ ☐

Lighting devices now automatically handle the assignment of universe and dimmer combinations.
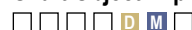
Unfolding Surfaces
☐ A L S D M ☐

Unfold developable NURBS surfaces (or CSG solids that represent developable surfaces) into a flattened 2D representation.

Wood Screws
☐ A L S D M ☐

Design Series users can now use 2D and 3D wood screws in detail drawings. A variety of configurations are available.
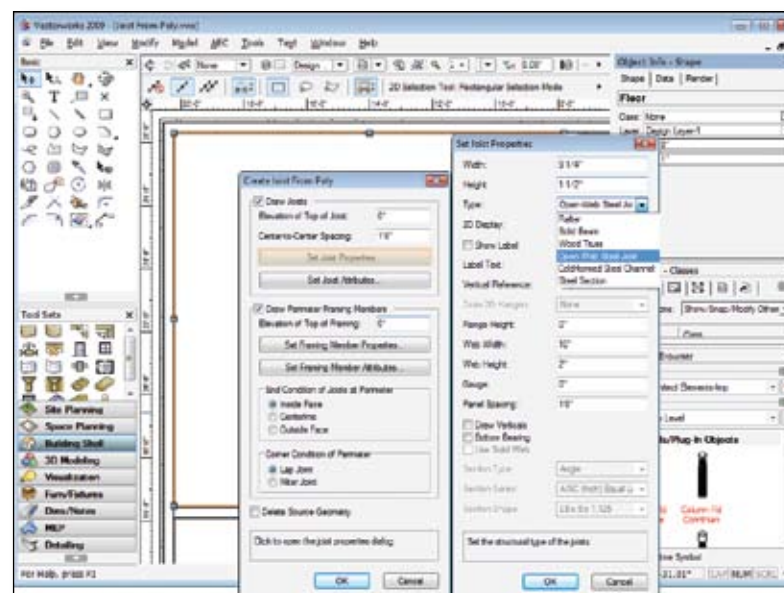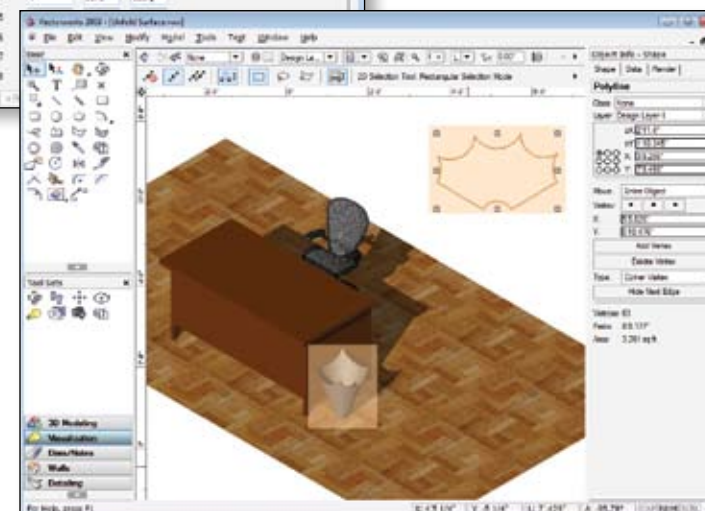
Shaft Object Improvements
☐ ☐ ☐ ☐ D M ☐

Create custom threaded shaft segments, where the flatness of both the top and bottom threads can be specified, in addition to the number of starts. You can also specify thread direction for both bearing locknut and Acme threads.
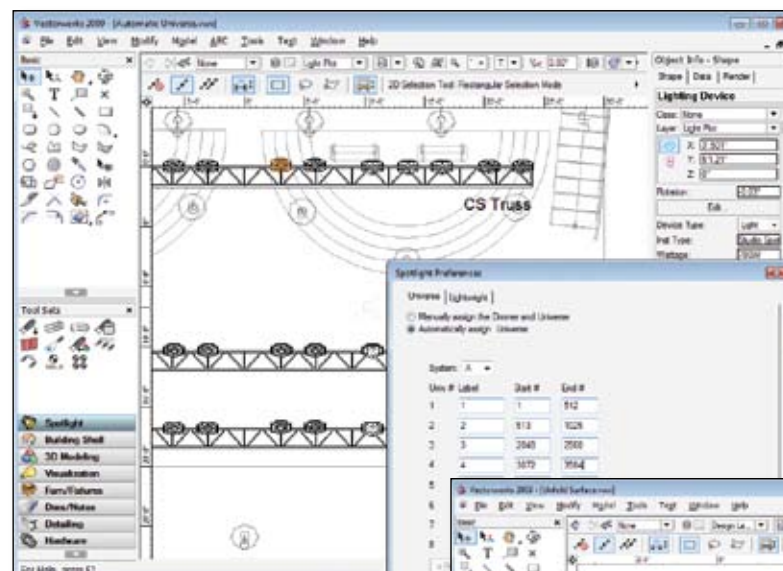
Automatic Universe Assignment

Unfolding Surfaces

Create Joist from Poly Command Improvements

Workflow

There are countless ways of working, so Vectorworks 2009 lets you choose the workflow that works for you. The software features improved import and export options, as well as enhanced capabilities for managing multi-user environments and workflows. Your work shouldn't feel like work.

Visibility Tool
[ ] A L S D M [ ]

Control your drawing visibility settings by selecting or isolating an object in your file based on its layer or class. You'll save a tremendous amount of time, especially when using imported AutoCAD® files. You can also change class and layer visibilities in the entire file with a quick double-click.

Drag and Drop Import
[ ] A L S D M [ ]

Our new drag and drop import makes importing simpler than ever. You can import files by dragging a file and dropping it onto an open Vectorworks file. Brilliant! Drag and drop import supports DXF/DWG, IFC, EPSF, Metafile, PICT, PDF, Shapefile, 3DS, IGES, SAT, SketchUp®, Parasolid, and image files.

DWG/DXF Import Support for ADT Objects
F A L S D M [ ]

You can now import ADT objects such as walls, doors, and windows. The plan rotation angles and 3D geometry remain intact.

DWG/DXF Support for Exporting Hatches and 2D Fills on Separate Layer
F A L S D M [ ]

We've added the option to export hatches and 2D fills from Vectorworks onto separate DXF layers, enabling smoother collaboration with AutoCAD files.

Improved DWG/DXF Export of Design Layer Viewports
[ ] A L S D M [ ]

Each Vectorworks design layer viewport now exports as a referenced DWG file with its own layers.

Batch Export Vectorworks Layers as Separate DXF/DWG Files
F A L S D M [ ]

A new option allows you to export all design layers or selected sheet layers in a Vectorworks document to separate DXF/DWG files.

DWG/DXF 2009 Import/Export Support
F A L S D M [ ]

Collaborate with ease. We support the AutoCAD 2009 file format for import and export.

### Import and Export of Parasolid X_T files
F A L S D M [ ]

We continue our long-standing tradition of supporting industry-standard file formats by importing and exporting Parasolid X_T files.
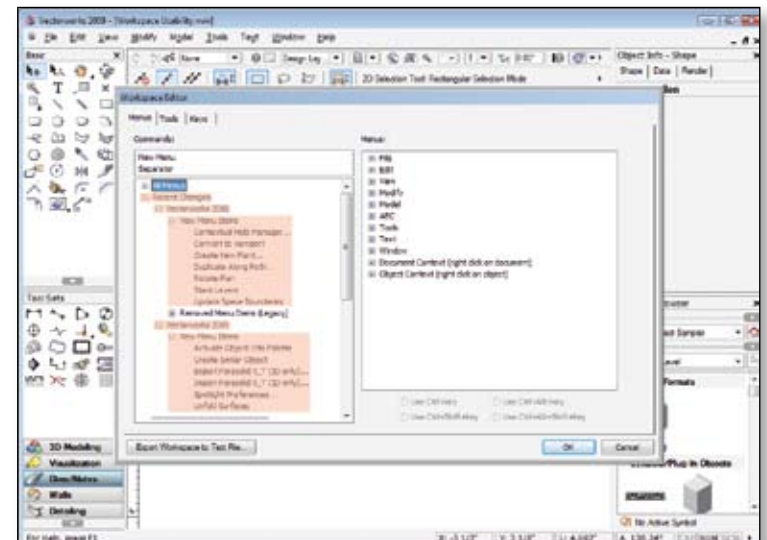
Custom Workspace Enhancements
F A L S D M [ ]

The Workspace Editor lists all new, changed, or legacy tools and menus for each new release, to help you more easily identify how to modify your custom workspaces. User-defined palette preferences are now stored, so your palettes remain exactly how and where you want them.
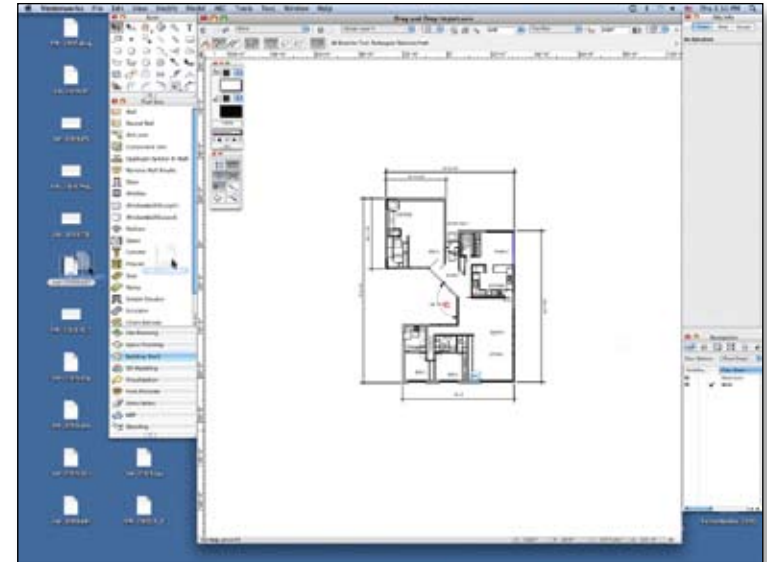
Drag and Drop Import

Custom Workspace Enhancements

Workflow

Open Reference Navigation Palette Command
☐ A L S D M ☐

Now you can open referenced files directly from the Navigation palette.

Locked File Alert
☐ A L S D M ☐

Who has the file that you want to open? Don't go on a wild goose chase to find out. You can get detailed information about a Vectorworks file that is currently in use by someone else. Find out who has the file open, which computer it is open on, and how long it's been open.

New Auto-Classing in Roof Objects
F A L S D M ☐

Now you can assign the class for a roof at the time of creation.

Real-Time Lightwright Import/Export
☐ ☐ ☐ S D ☐ ☐

Automatically synchronize your paperwork and your plot. The new exchange feature lets you set up automatic data exchange between the two software applications at the beginning of the project. Data updates in the Vectorworks Spotlight drawing are automatically exported to Lightwright 5, and data changes in Lightwright 5 are automatically imported into the Spotlight drawing.
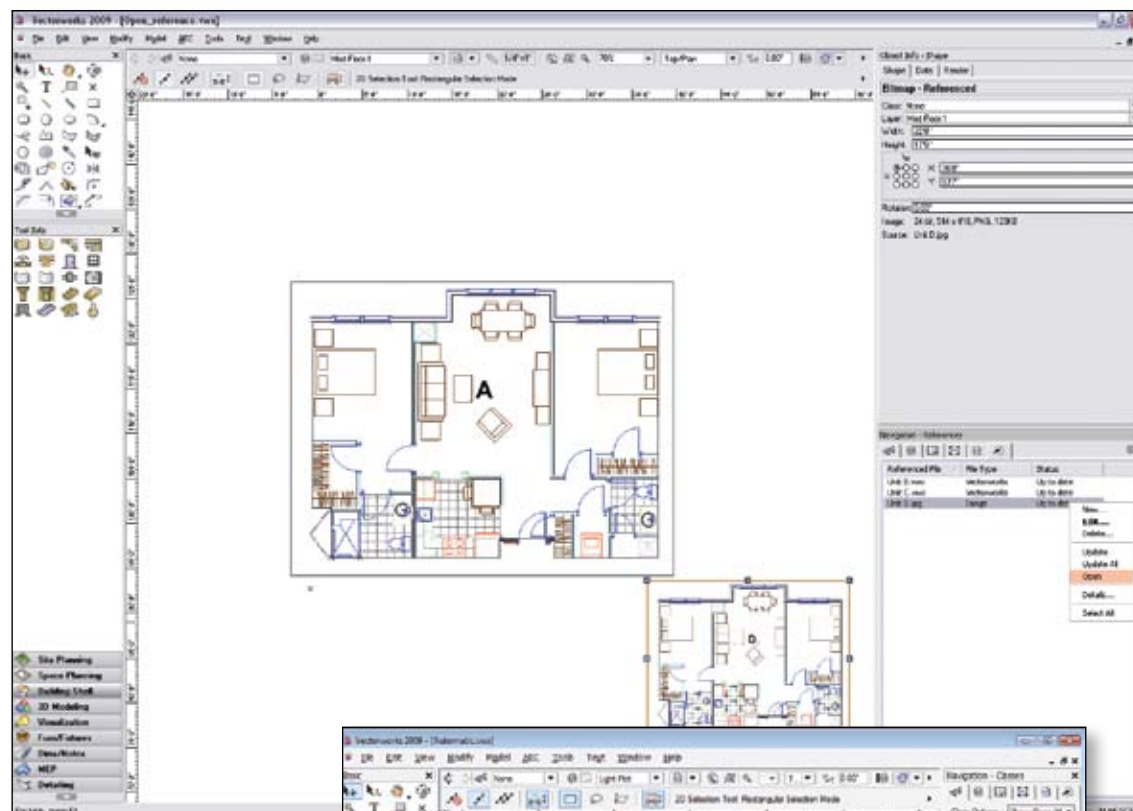
Number Instruments Command
☐ ☐ ☐ S D ☐ ☐

Multiple data fields in the lighting device can be automatically modified and incremented; the increment can be optionally based on channel number.
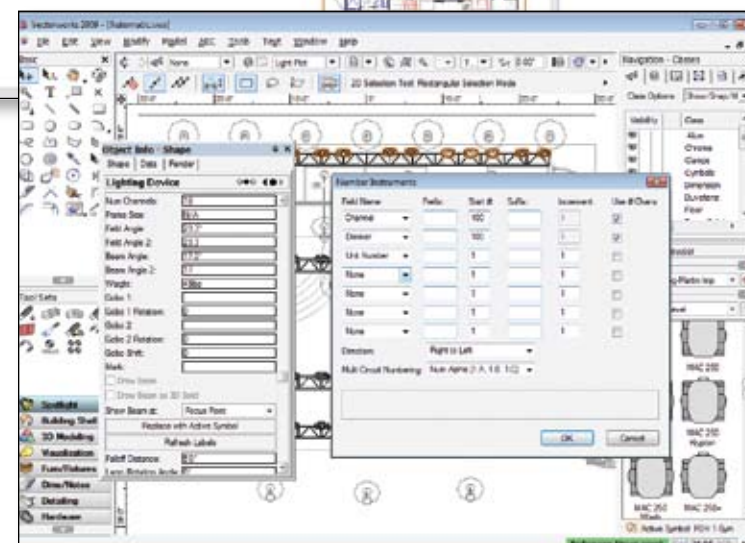
Polyline Arc Improvements
F A L S D M ☐

Two new modes in the Polyline tool enable you to create precise arc segments for greater control and flexibility when drawing free-form shapes like planting beds and layout plans.

Open Reference Navigation Palette Command

Number Instruments Command

Usability

Simplify your work. Over the past 23 years, Vectorworks has built a reputation as a comprehensive software application that enables you to do everything with one package—we make the experience simple so you can concentrate on great design.

Improved Snapping
F A L S D M □

Keep it snappy. With a first-class snapping system that provides feedback from your cursor, you can draft and model with more precision and greater accuracy. New preferences allow the appearance of snapping elements to be customized.

Pre-Selection Indication
F A L S D M □

Highlight the objects you may wish to select before you ever click the mouse. You'll know which objects will interact with your selected tool. Highlighting appearance can also be customized.

PDF Snapping
□ A L S D M □

You can snap to imported PDF files and use them more effectively as a basis for your designs.

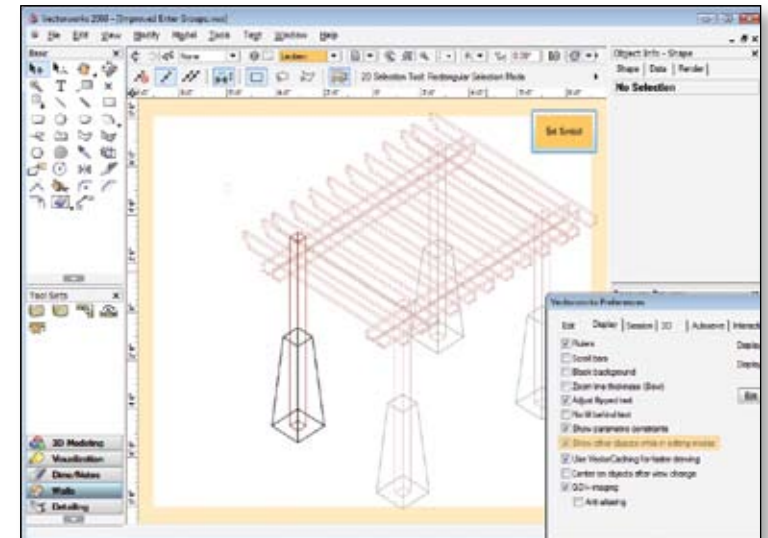### Editing Mode Improvements
F A L S D M □

Groups, symbol instances, solids, and viewport groups can now be edited relative to other related drawing objects. You can view and snap to other objects outside of the group, and, in Design Series, switch between stacked and non-stacked layer view while editing, making it easier for you to make edits within the drawing context.
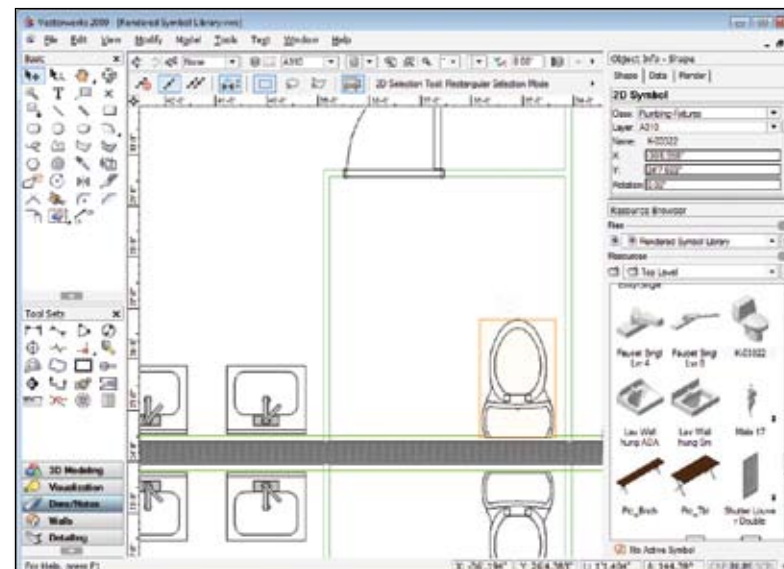
### Resource Browser Improvements
F A L S D M □

Resources in a drawing can be located in the Resource Browser with a context menu command, and referenced symbols can be edited from the Resource Browser. You can also preserve folder hierarchy when symbols are created, imported, or moved (and, for Design Series users, exported). Finally, you'll have better control over the symbol thumbnail view and render modes.
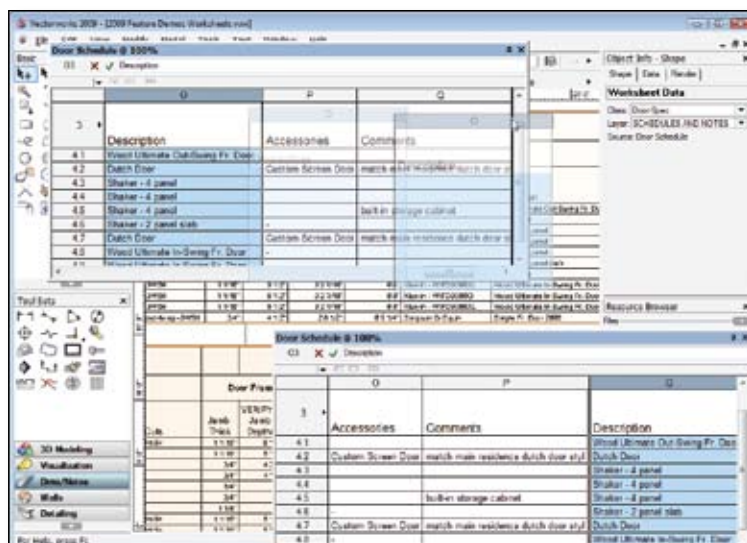

Editing Mode Improvements

Resource Browser Improvements
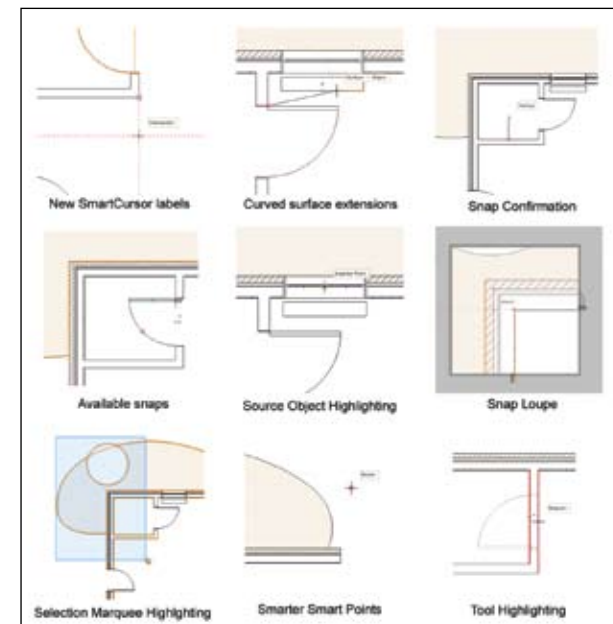
Improved Snapping

Pre-set Worksheet Zoom Levels and Drag and Drop

Usability

Pre-set Worksheet Zoom Levels and Drag and Drop
F A L S D M □

Now even easier to use, worksheets have pre-set levels of magnification, as well as the ability to move copies of rows and columns by dragging and dropping them.

New Worksheet Functions
F A L S D M □

Eight new formula functions enhance the calculation capabilities in your worksheets.

New Data Bar Options
F A L S D M □

We now offer options for auto-cycling to non-displayed fields on the floating data bar and the ability to turn off the instant data bar activation, giving you greater control of your data input preferences.

Column and Pilaster Improvements

Object Info Palette Enhancements
F A L S D M □

Singly-selected objects that have been assigned a name now display the name at the bottom of the Shape tab. The object position locator now matches the rotation of a singly-selected rotated rectangle. And, a new command provides a shortcut key combination to switch the focus from the drawing to the first editable field of the Object Info palette.

Improved Send Forward and Send Backward Commands
F A L S D M □

The commands have been modified to consider overlapping objects in the stack position and to send objects all the way to the front or back of the stack in a single step.

Improved Drawing Label Object
F A L S D M □

Drawing label ruling lines can be fit to the longest line of text above or below the line, or adjusted by a new control point. The distance of text above and below the ruling line can also be adjusted.

Improved Usability in Revision Cloud Object
F A L S D M □

The object has been modified so that you can more intuitively set the parameters by billow height and billow variability.

Add Nut and Washer Options to J-Bolt
□ A L S D M □

Add a washer, lock washer, and nut to the 2D J-bolt, and show threads on the 3D J-bolt.

Space Object Improvements
□ A □ □ D □ □

Pick from a pre-defined list of space and department names, and create auto-boundaries that produce customized boundary and area reports.

Stair Improvements
F A L S D M □

Stairs contain many more parameters for improved 2D and 3D appearance. Wood and steel stairs with steel channel stringers can now be created, and handrail/guardrail usage is much more flexible.

Column and Pilaster Improvements
F A L S D M □

Now, you can create columns in custom architectural and non-symmetrical shapes and, in Vectorworks Architect, you can specify column and pilaster structural components, whether they're wood, concrete, or a manufactured steel shape. Architect users can also export the column or pilaster to IFC format for exchange with structural analysis programs.

Usability

Customizable Roofs in Massing Models
☐ A L ☐ D ☐ ☐

Create customizable roof geometry for massing models.

Framing Member Object Improvements
☐ A ☐ ☐ D ☐ ☐

The different types of framing member objects have been consolidated for more flexibility when creating a framing model. Choose a custom framing member profile and specify framing member materials, including wood, steel, and precast concrete shapes.

Plant Tag Improvements
☐ ☐ L ☐ D ☐ ☐

Effectively arrange and apply your personal style in each planting plan with more control over plant tag definition and placement.
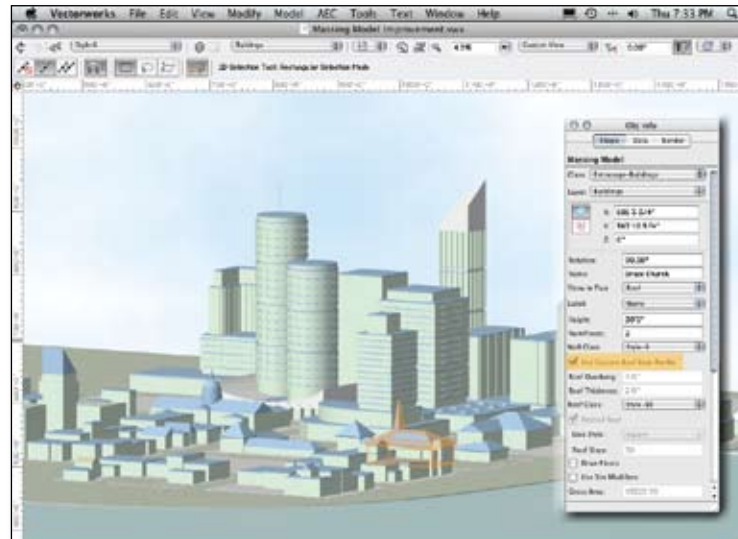
Customizable Roofs in Massing Models

Create Plot and Model View Command
☐ ☐ ☐ S D ☐ ☐

This new command enables Spotlight users to create and maintain plot and model views with unique 3D rotation angles. The command specifically allows lighting positions, trusses, lights, and associated geometry to be placed and oriented in 3D in the model layer. Now you can display a vertical lighting position in both plot and model view.
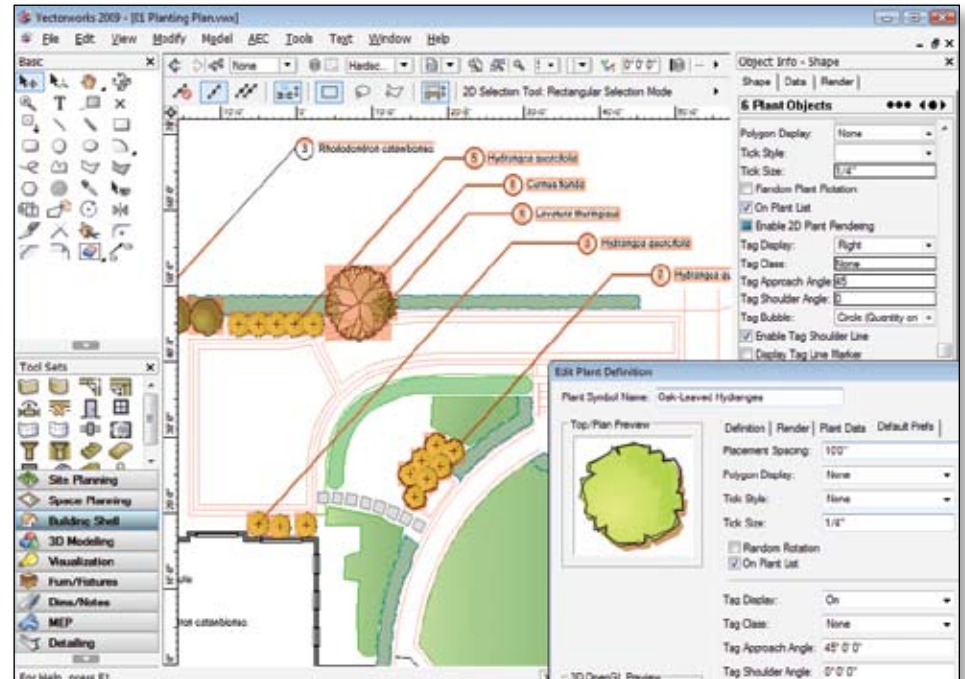
Improved 3D Bevel Gear Object
☐ ☐ ☐ ☐ D M ☐

3D bevel gears can now be drawn with teeth, and a spiral angle can now be specified for 3D spiral bevel gears.
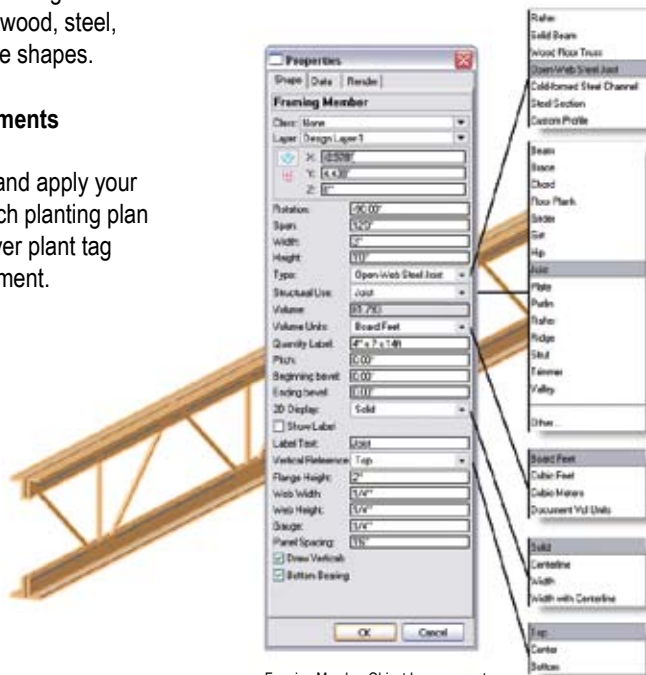
Framing Member Object Improvements

Plant Tag Improvements

Best in 3D

Give your designs new dimension with Vectorworks' unsurpassed 3D modeling capabilities. Vectorworks is so robust, you can tackle larger and more complex models and enjoy higher levels of modeling automation. With Parasolid at its core, Vectorworks 2009 boasts the best 3D modeling available.

Count on flexibility, accuracy, and precision and spend more time designing. Whether your focus is on simple design, or on incorporating challenging geometry into your work, Vectorworks 2009 provides what you need to bring your visions to life.

Image courtesy of Luis Ruiz

Image courtesy of Polygon Architects

3D Wall Improvements
`F A L S D M ☐`

Walls take advantage of Parasolid technology for improved precision, reliability, and speed. Now, symbols inserted into walls can cut holes of any shape in 3D walls.

3D Modeling Improvements
`F A L S D M ☐`

We've incorporated Parasolid functionality into several 3D Power Pack tools and commands, including: Create Fillet Surface command, Stitch and Trim Surfaces command, Project tool, Loft Surfaces tool, Protrusion/Cutout tool, and Fillet Edge tool.

Extrude Along Path Enhancement
`F A L S D M ☐`

Profile curves with sharp corners can now be extruded along a path with sharp corners. You can also constrain the extruded object to the global Z axis.

Variable Radius Fillet across Tangentially Connected Edges
`F A L S D M ☐`

You can now create a variable radius fillet along tangentially connected edges.

Fillet and Chamfer NURBS Curves
`F A L S D M ☐`

NURBS curves can now be filleted or chamfered.

3D Tapped Holes
`☐ ☐ ☐ ☐ D M ☐`

You can now create a 3D tapped hole solid object that can be subtracted from any other solid object to accurately create 3D models of molds, dies, and many other machine parts.

Calculate Cut and Fill in Site Model
`☐ A L ☐ D ☐ ☐`

With our integration of Parasolid modeling technology, you'll get reliable and accurate cut and fill calculations in your site models.

Site Modifiers Applicable to Existing Site Models
`☐ A L ☐ D ☐ ☐`

Site modifiers can now modify existing site models for an accurate representation of your current site before you make proposed changes.
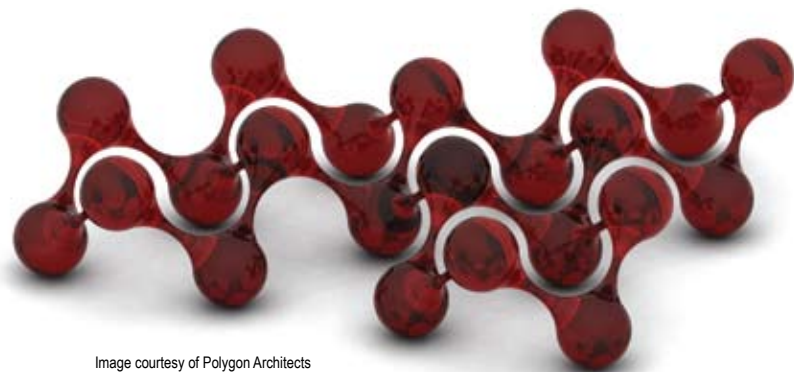
Rendering

Bring your drawings to life. Renderworks 2009 makes rendering even easier with new capabilities, so you don't need a separate rendering program. Instead, spend your time presenting compelling designs with confidence and style.

Texturing Improvements
☐ ☐ ☐ ☐ ☐ R

Texturing in Renderworks just got even easier. You can individually texture multiple parts of objects, such as wall tops, start caps, extrude edges, and more. Additional improvements include new mapping ease-of-use functions.

New Textures
☐ ☐ ☐ ☐ ☐ R

Forbo flooring: Choose from 100 new material textures from the Effect, Eternal, and Smaragd product lines.

Image courtesy of Polygon Architects
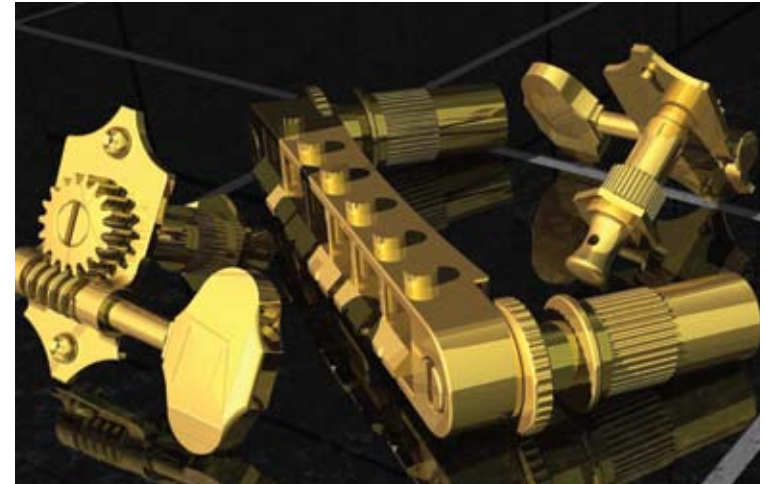

Image courtesy of Juan Carlos Lopez

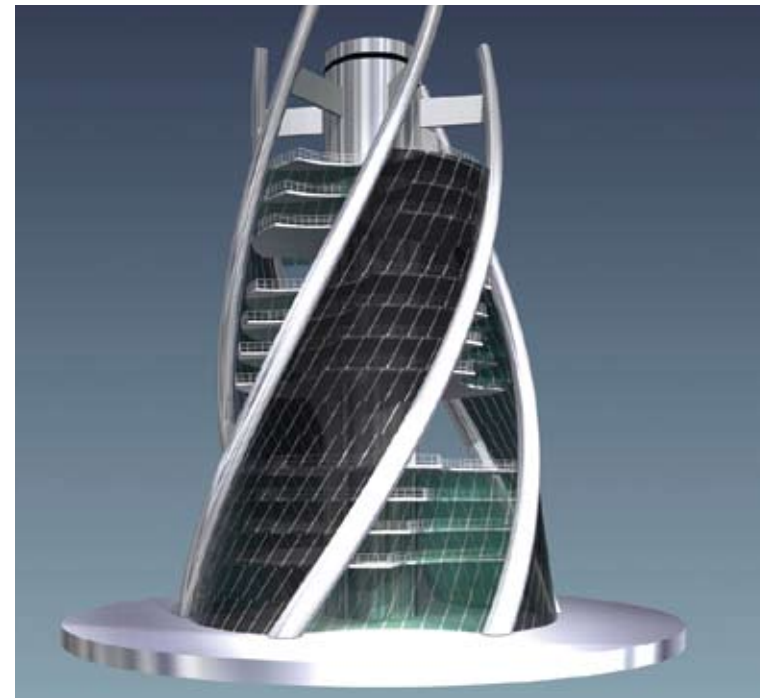Image courtesy of Gromatzky Dupree & Associates

Image courtesy of Paul Oravec

Get Going

With Vectorworks 2009, you'll enjoy the flexible, versatile, and intuitive experience that is the heart of Vectorworks. And, with the added power of Parasolid, you'll take your designs to unbelievable new heights. You can get all of this at a price that consistently beats the competition. With Vectorworks 2009, we're revolutionizing the design world. Make the switch to Vectorworks 2009 today. www.vectorworks.net

New & Updated Content

Gradients
F A L S D M □
We have added a greater variety of gradient choices to simulate wood flooring, plants, paints, metals, sky, ground, and water.

Default stairs
□ A L S D □ □
More commercial stair symbols are available.

Loewen windows and doors
□ A □ □ D □ □
Choose from 89 doors and 840 windows from the Loewen catalog.

**Weather Shield®
windows and doors**
□ A □ □ D □ □
This brand new symbol library features 174 doors and 834 windows from the Weather Shield catalog.

Aga & Rayburn ranges
□ A □ □ D □ □
Use 64 new hybrid symbols for ranges from Aga & Rayburn.

Metric wall styles
□ A □ □ D □ □
We've incorporated UK wall styles.

Door hardware
□ A L S D □ □
We added many additional, textured door hardware symbols.

Architectural and landscape electrical light fixtures
□ A L S D □ □
These two new 3D light fixture libraries now have many textured architectural and landscape lighting symbols.

Electrical accurate lamps
□ □ □ □ □ □ R
We updated this library with additional lamps and a new set of European and UK lamps.

Forbo flooring
□ □ □ □ □ □ R
Choose from 100 new material textures from the Effect, Eternal, and Smaragd product lines.

**Molding profiles from
Copper Beech Millwork**
□ A □ S D □ □
Pick from 1,200 molding profiles.

Cabinet pulls
F A L S D M □
Check out the new 3D cabinet pulls and handles.

**New common Australia/
New Zealand structural shapes**
□ A L S D M □
New ANZ Series structural shapes are now available through existing steel structural shapes provided as default resources.

Landscape objects
□ □ L □ D □ □
This new library contains a number of landscape and hardscape stipple patterns. Additionally, there are new landscape architectural symbols—including arbors, pools, patio furniture, park benches, grills, and fire pits.

Clay Paky Lighting
□ □ □ S D □ □
Choose from 12 new symbols.

Coemar Lighting
□ □ □ S D □ □
We've added 30 new symbols.

High End Systems
□ □ □ S D □ □
Pick from eight new symbols.

Martin® lights
□ □ □ S D □ □
Now use six new symbols.

Selecon lights
□ □ □ S D □ □
Pick from 26 new symbols.

Vari-Lite® lights
□ □ □ S D □ □
Choose from seven new symbols.

Color Kinetics™ lights
□ □ □ S D □ □
With LED fixtures, you'll have fourteen new symbols.

James Thomas™ lights
□ □ □ S D □ □
Pick from 12 new lighting symbols.

Atlas Sound® audio symbols
□ □ □ S D □ □
We've added 33 symbols.

EAW audio symbols
□ □ □ S D □ □
Introducing 107 new symbols.

D&b audiotechnik® symbols
□ □ □ S D □ □
Choose from 34 speaker symbols.

**Meyer Sound® Laboratories
audio symbols**
□ □ □ S D □ □
46 new symbols available.

James Thomas trusses
□ □ □ S D □ □
Pick from 250 trusses.

Banquet furniture
□ □ □ S D □ □
Choose from 15 new tables and 6 new chairs.

System Recommendations
Mac OS X 10.4.11 or later
Mac OS X 10.5.4 or later
QuickTime 7 or higher
PowerPC G5 or newer
Intel Core 2GHz or better

Windows XP SP 3
Windows Vista SP 1
QuickTime 7.2 to 7.5
(higher versions not recommended)
Pentium 2GHz or better

Vectorworks
RAM 2GB
Hard drive space 10GB free

Vectorworks plus Renderworks
RAM 4GB
Hard drive space 10GB free

Vectorworks Designer
RAM 2GB
Hard drive space 10GB free

Vectorworks Designer plus Renderworks
RAM 4GB
Hard drive space 10GB free

See www.vectorworks.net/sysreq for updated information.