

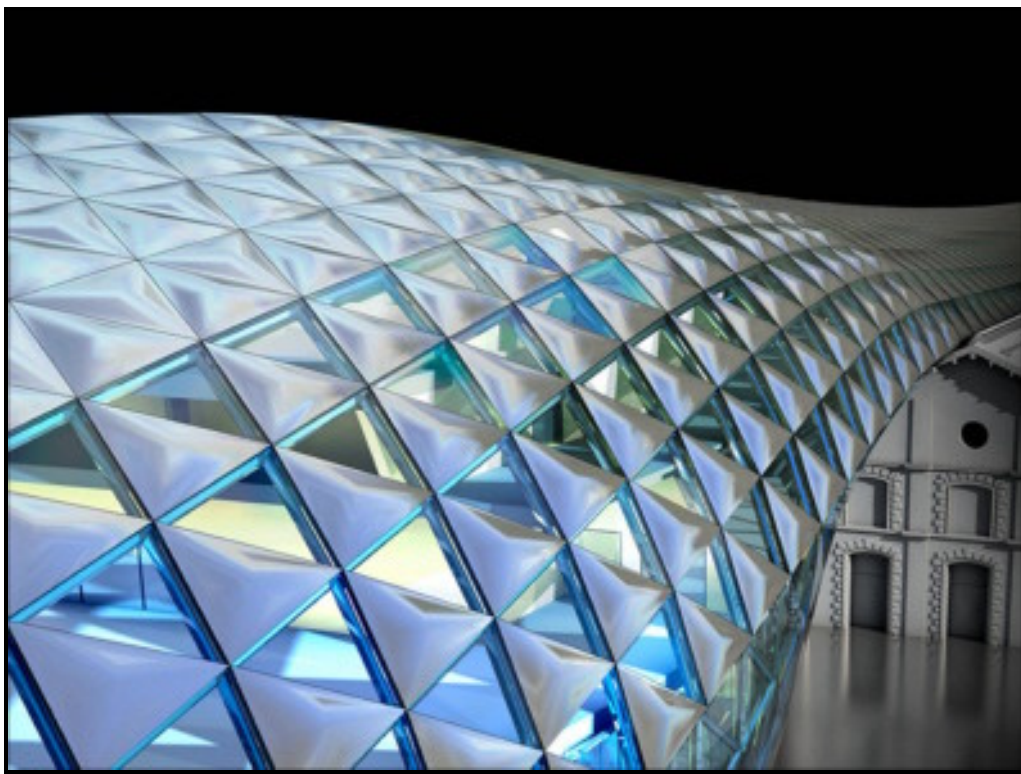
# Revit Architecture 2010 New Features Preview Guide

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I summarized some of **Revit®Architecture 2010's** major improvements and additional features on our IMAGINiT Architectural Solutions blog: [www.rand.com/imaginit/architecturalBlog](http://www.rand.com/imaginit/architecturalBlog)

This whitepaper expands and details these Revit Architecture 2010 features that I summarized in my blog article; **Download Revit®Architecture 2010 Preview Guide**

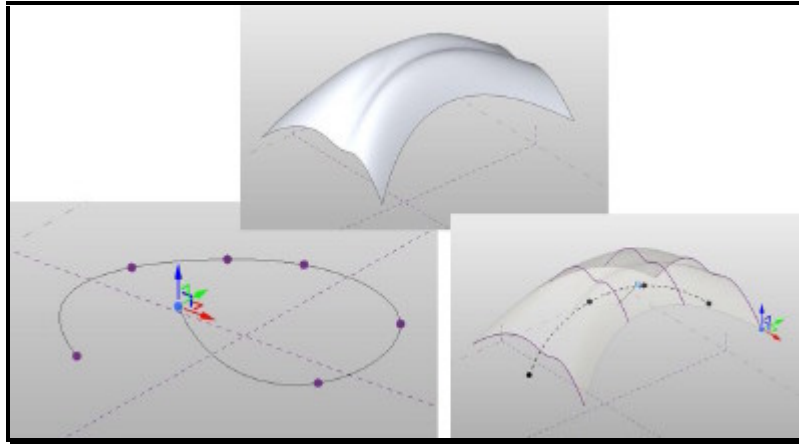
[http://rand.com/imaginit/1/rss/viewitem.asp?feedid=BLOGS\\_ARCH\\_ALL&guid=566](http://rand.com/imaginit/1/rss/viewitem.asp?feedid=BLOGS_ARCH_ALL&guid=566)



This is the Index of Autodesk®Products and Resources Used to Create This Article

Autodesk®Revit®Architecture 2010		<a href="http://www.rand.com/imaginit/revitArchitecture">www.rand.com/imaginit/revitArchitecture</a>
Autodesk®Revit®2010 Software		<a href="http://www.rand.com/imaginit/revit">www.rand.com/imaginit/revit</a>
Autodesk®Civil 3D		<a href="http://www.rand.com/imaginit/civil3d">www.rand.com/imaginit/civil3d</a>
IMAGINiT Civil Solutions Blog		<a href="http://www.rand.com/imaginit/civilBlog">www.rand.com/imaginit/civilBlog</a>
Autodesk®Inventor		<a href="http://www.rand.com/imaginit/autodeskInventor">www.rand.com/imaginit/autodeskInventor</a>
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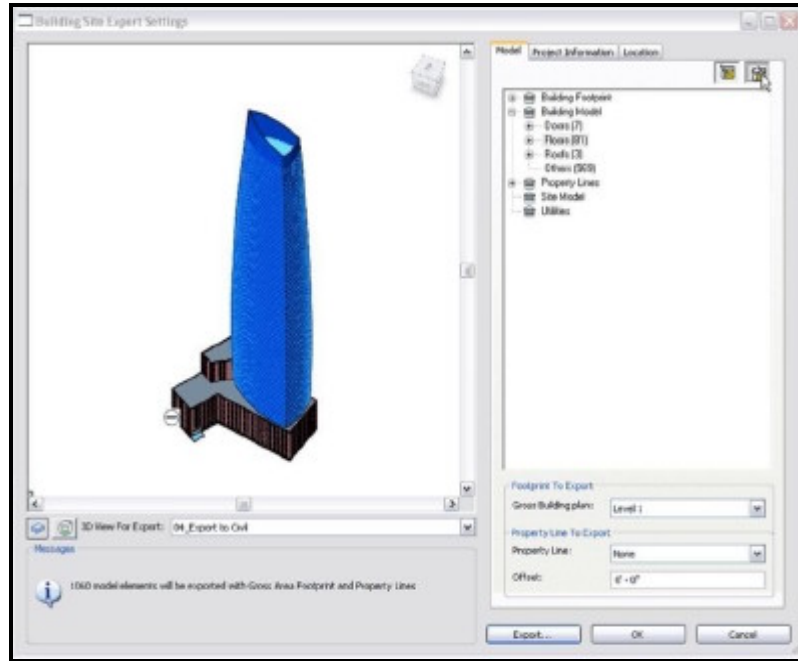
**Revit 2010 Conceptual Design | Complex Surface Modeling**



Autodesk®Revit®Architecture 2010 provides some brand new modeling tools as well. Revit 2010 includes a full-featured set of complex surface modeling tools. Users can create doubly-curving NURBS-like surfaces with the same simple steps as a basic extrusion.

- Easy-to-draw 3D splines and manipulation techniques for the 3D environment.
- It's also easier now to create 3D curves. Draw traditional splines or use new reference points to create a 3D spline with control points that you can drag in any direction. You can quickly toggle the control widget between local and global coordinates with the spacebar.
- X-ray mode helps you better understand your geometry as you generate form and gives you better control over your manipulations. At any time, reveal the parametric framework that Autodesk Revit Architecture is building for you with one click.
- Tools such as Add Edge and Insert Profile provide simple and accurate ways to modify your form with a more sculptural feel.

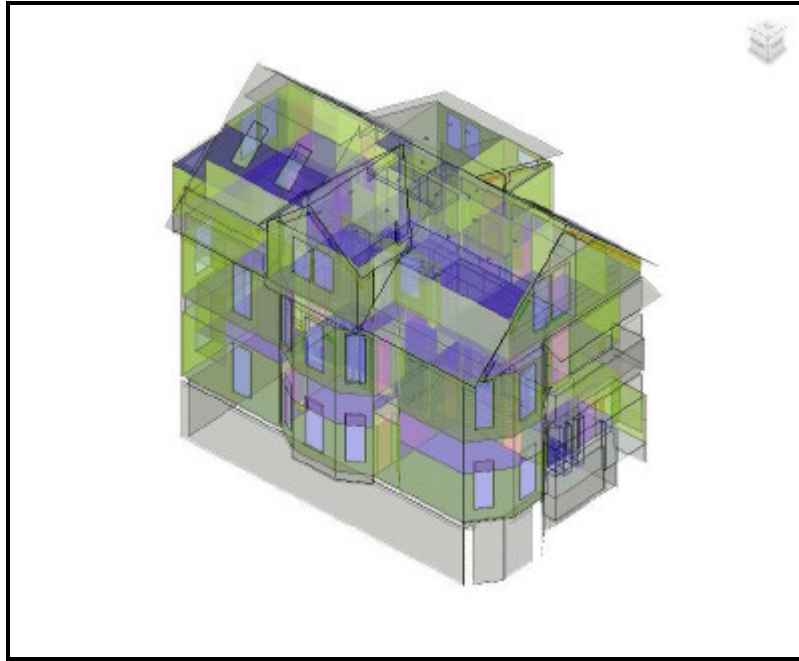
## Revit 2010 Project Export to AutoCAD Civil 3D



Export a Revit 2010 project to AutoCAD® Civil 3D with confidence using the new **Autodesk Exchange File format [\*.adsk ]**.

- A new UI for project coordinates, allow you to graphically manage coordinate systems in Autodesk® Revit®.
- New tools help minimize the number of model elements exported (new interior/exterior parameters and view templates). Provide precisely what information is most relevant to your engineers, such as utility connections, topography and other site elements.
- A new export dialog provides a detailed visual review your model information before generating your export. Inspect the model with a variety of view styles and the ability to isolate building components, like floors, roofs and windows. Edit metadata, such as project information, which will all be read right inside AutoCAD Civil 3D.

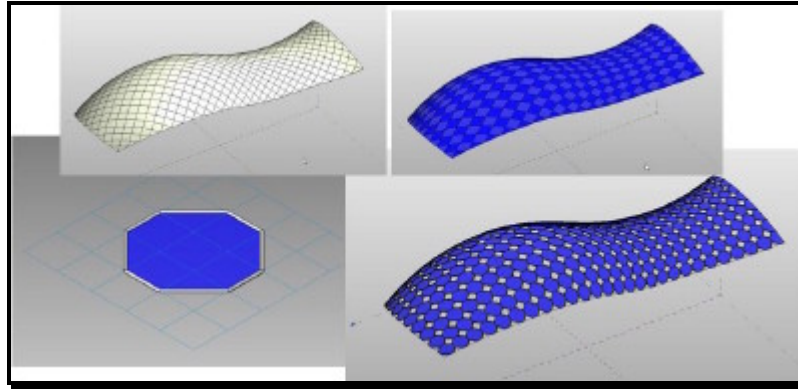
## Revit 2010 gbXML Analytical Improvements



View a dynamic gbXML analytical model and which rooms have warnings associated with them.

- Isolate rooms and view individual surfaces
- Surfaces color coded based on type of analytical surface
- Rooms grouped based on level
- Ability to define energy data previously only available through Project Information dialog box

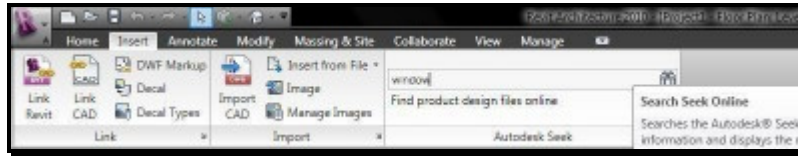
**Revit 2010 Conceptual Design | Divide, Pattern, Panelize Surfaces**



Bring your conceptual designs into reality with new tools which allow you to divide, pattern and panelize your surfaces. Schematically study curtain system designs, structural framing layouts or even begin to apply real curtain panels to your form with these new and easy-to-use tools.

- Divide your surface into manageable pieces with one click. Quickly modify divided surface spacing and even split divided surfaces by levels, reference planes or model lines that you sketch. Iterate on designs with speed, flexibility, and accuracy.
- Autodesk Revit Architecture 2010 will ship with a library of pattern families that are flexible and intelligent. No scripting is necessary to create complex parametric curtain systems. The intelligent curtain panel families automatically map and conform to the divided surface of your complex forms. By leveraging existing Autodesk Revit family editor technology and the new modeling tools, these advanced design techniques can be accomplished by any user.
- All of your elements are parametrically linked. No information is lost and there's no need to manually update your designs at any time. Everything is integrated, intelligent and easy-to-use. Your designs have a persistent relationship to the BIM model at all stages of the project.

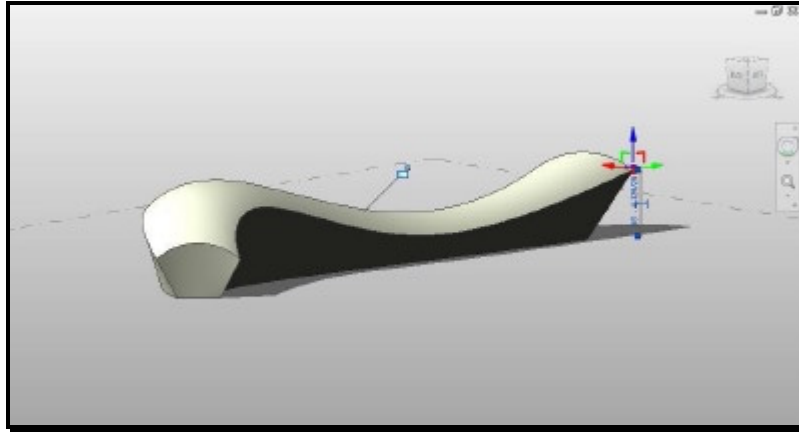
## Revit 2010 Import | Publish Integration with Autodesk Seek



Publish to and search Autodesk Seek right from the Autodesk Revit Architecture UI. Search for content in Autodesk Seek from the Insert tab of the ribbon. Publish your custom content to Autodesk Seek through the Application Menu.

- Users can now add OmniClass categories to all families.
- The OmniClass Construction Classification System (known as OmniClass™ or OCCS) is a new classification system for the construction industry.
- OmniClass is useful for many applications, from organizing library materials, product literature, and project information, to providing a classification structure for electronic databases. It incorporates other extant systems currently in use as the basis of many of its tables—MasterFormat™ for work results, UniFormat for elements, and Electronic Product Information Cooperation (EPIC) for structuring products.

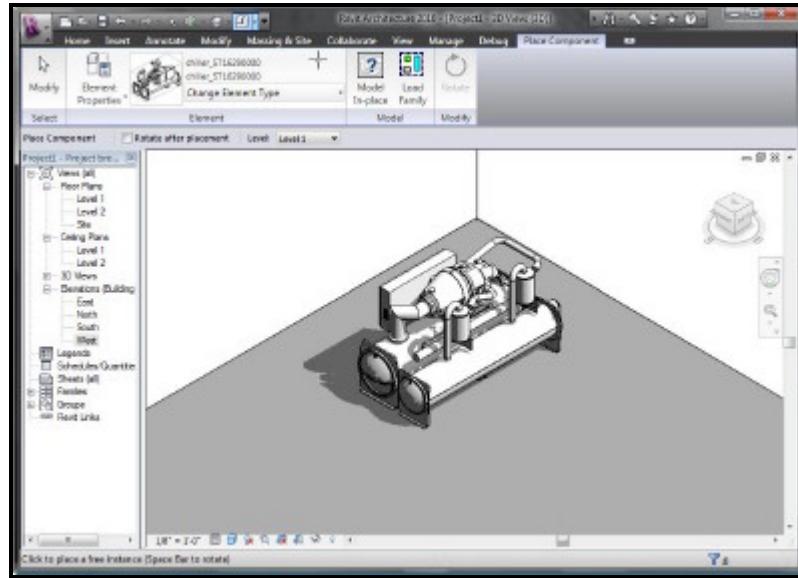
## New Family Editor Environment for Massing



Revit Architecture 2010 provides a new family editor environment for massing, which still allows you to work either in the project or in the stand-alone family editor. The modeling environment includes improvements such as gradient backgrounds for 3D views, anti-alias display and improved selection and pre-highlight graphics.

- Form generation is quick and easy with the click of a single button. You can make all the forms you already know (extrude, sweep, revolve, loft) but with one too – "Create Form." Autodesk Revit 2010 software knows what to make based on selection of profiles and paths. If there are multiple options, Autodesk Revit Architecture will make a best first guess and then provide alternate options from which to choose.
- Users are no longer constrained by old modeling conventions. Start with an extrusion and turn the form into a sweep or a blend by directly manipulating the form. There's no need to start over or redefine what type of geometry you want to create. Autodesk Revit Architecture allows you to design freely as it works in the background to manage the more technical aspects of your model. No more modes.
- Easily add parameters and constraints, and then flex your model interactively, not through complicated dialogs. But you can always modify with your model the way that suits the task at hand – interactively, through the properties dialog, with interactive dimensions or with parameters. Autodesk Revit Architecture provides you with flexibility, options and control so you can work the way that's best for you.

## Revit 2010 | Import Content from Autodesk Inventor



Import custom content from Autodesk Inventor via the Autodesk Exchange File format [.adsk]. This functionality will provide users access to specific and accurate manufactured content.

- The first step in the ecosystem is to capture the original design data. Autodesk® Inventor® software will publish a simplified version of the original Inventor model, since Autodesk Revit Architecture software does not require the same level of detail as the original model. However, while the Autodesk Revit Architecture user might not care about the same level of detail for geometry, they will care about how it will connect to their Revit model and what some of its performance and specification data is, and this data is preserved in the transition from Autodesk Inventor to Autodesk Revit Architecture.
- Manufacturers that create content can streamline the process for getting their content out to their Autodesk Revit Architecture customers by simplifying the delivery process. Rather than publishing three models from three software packages, they can deliver one model directly from one software package.
- The exported Inventor file is intelligent. Parametric data is preserved. Connectors are intact. Geometry can be enhanced with additional connectors in Autodesk Revit Architecture.
- Control the look of your import using level of detail. Show more or less detail, depending on your view.

## Revit Architecture 2010 Customizable User Interface



Revit Architecture 2010 provides immediate access to the commands you use most through the new Quick Access Toolbar. It can be customized in several ways to include your favorite and most frequently used tools.

- The right-click menu includes options that enable you to easily remove tools from the toolbar, add separators between tools, and display the Quick Access toolbar above or below the ribbon.
- In addition to the right-click menu, the Quick Access toolbar includes a flyout menu, which displays a list of common tools that you can select to include in the Quick Access Toolbar. From here, you can also choose to display the Quick Access toolbar below the ribbon.
- You can add any tool you want the Quick Access Toolbar simply by right-clicking on the icon in the ribbon interface and choosing "Add to Quick Access Toolbar"

## About the Author: Daniel Hughes

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Daniel, leverages more than thirty years of market experience serving as a corporate owner, technologist, jobcaptain, project manager, trainer, educational speaker | author and blogger. He provides our clients with a diverse level of credible expertise for their transition-implementation of a BIM design process for their organizations.



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