

# BIM and Searching for Building Product Content

The increasing use of BIM is fueling the demand for BIM-friendly building product content. This whitepaper examines how new Autodesk search technology enables BIM users to more easily find products to include in their building designs—from within their native design environment.

## BIM Content

As building design teams adopt BIM, there's a growing need for more detailed building product design information earlier in the overall design process. This allows designers to better convey their design ideas and supports related design activities such as visualization, energy analysis, etc.

Product data and content can come from a variety of sources: libraries shipped with BIM solutions; user-generated content or files shared with colleagues; community sites like RevitCity ([www.revitcity.com](http://www.revitcity.com)); content aggregators like BIMWorld ([www.bimworld.com](http://www.bimworld.com)) or McGraw-Hill Construction Sweets Network ([www.sweets.com](http://www.sweets.com)); or directly from product manufacturers like USG ([www.usgdesignstudio.com](http://www.usgdesignstudio.com)).

This abundance of BIM content is good news for Revit users, but designers now need an efficient way to search that distributed content to find the exact design data and files they're looking for (think of what the Internet would be like without Google et al). This requires advanced search technology that can present all of this BIM content in a unified, useful way; and in the fewest possible clicks. Autodesk® Seek gives Revit users this advance search capability.

## Autodesk Seek

Autodesk Seek ([seek.autodesk.com](http://seek.autodesk.com)) is a recently released web service developed by Autodesk for Revit and other Autodesk platforms. This web service allows designers to search for building products, regardless of the source of the data—facilitating the free flow of data from product manufacturers to designers. The service is built on an open, non-proprietary platform where Revit users (and anyone else) can quickly and easily search for product information—and design files associated with those products—using product-specific search parameters like “casement window” or “French door”.

Autodesk Seek is built on dynamic technology that indexes and categorizes distributed

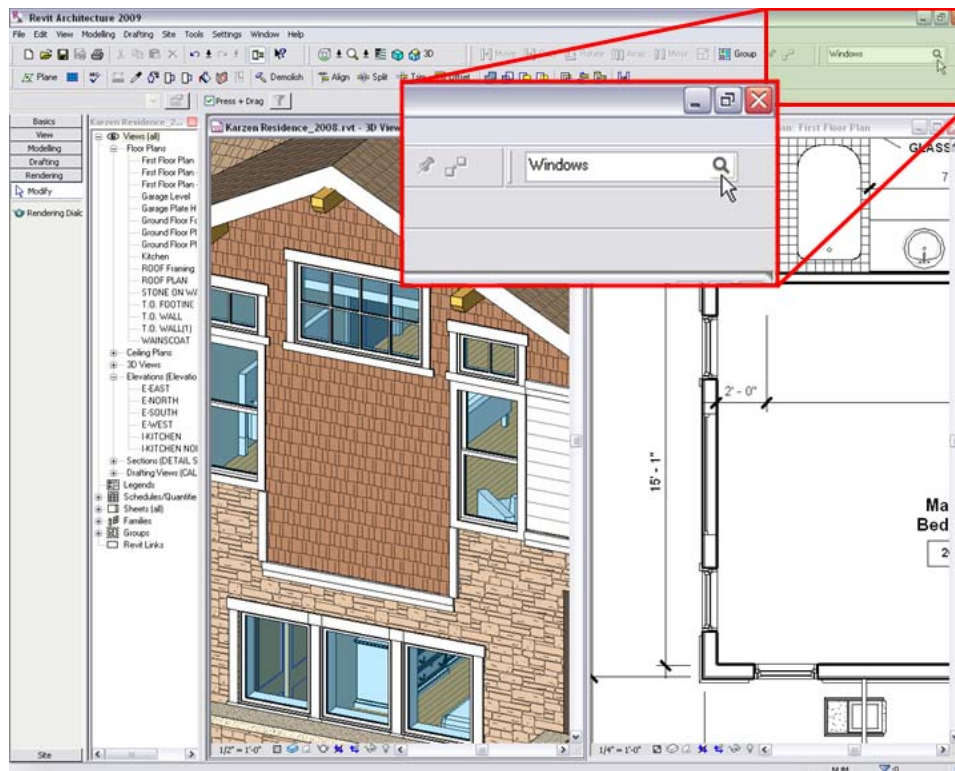
content from a wide variety and ever increasing number of sources including data from content aggregator partners, product manufacturers, and existing Revit and AutoCAD® building product libraries. The product content found by Autodesk Seek includes such things as 2D drawings, specifications, descriptions for that product or component, and native design files that can be used directly in the authoring solution (Revit .rfa files for instance).

The parametric search technology of Autodesk Seek is well suited for finding products that contain precise descriptions and attributes. For example, it enables designers to find and specify green products more easily based on the highly descriptive nature of green products such as performance ratings, LEED scores, materials usage, and so on. This differentiates its results from the search results of mainstream search engines that search based on unstructured text strings alone versus structured product criteria.

Autodesk Seek makes published building product information more accessible to designers and therefore makes it easier for them to include the products in their design. It also allows product manufacturers to increase the specification of their products by enabling designers to more easily incorporate the manufacturers' products in their building designs.

### Content Search Capabilities

The images below illustrate how Autodesk Seek can be used to find product content from within a Revit software application. The Autodesk Seek toolbar and search window is included in the Revit user interface, enabling Revit software users to search for product content from within the Revit design environment. [Note: Although the toolbar has been specifically added to the user interfaces for Revit and other products, the Autodesk Seek service is based on an open platform and can be accessed from a standard web browser.]



**Figure 1:**  
An Autodesk Seek search window is included in the Revit user interface.

Revit users can search for a product by typing in any keyword associated with the product ("windows", for example) in the search box and hitting the enter key. A web browser is launched and the initial set of results is displayed in an Autodesk Seek browser window.

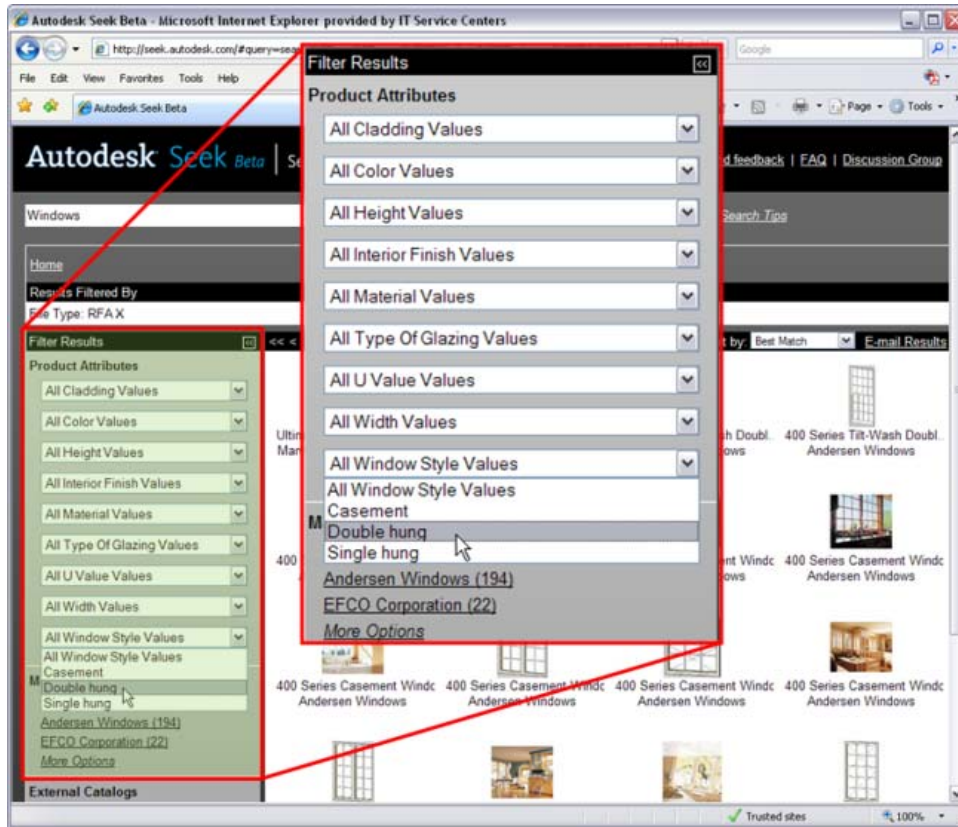


Figure 2:

A standard web browser window displays the results of the product search.

Filters can then be used to refine the search results—similar to how familiar online retail websites allow shoppers to browse for products and narrow their product searches. For

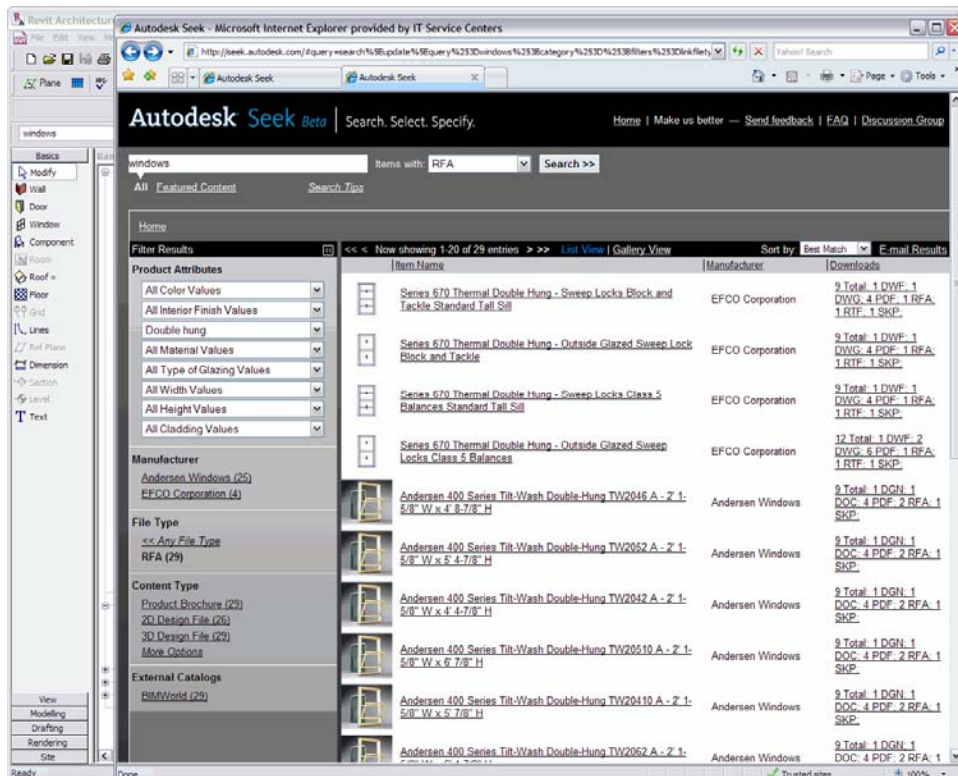


Figure 3:

Search filters allow users to quickly narrow their product choices and get access to relevant part files or data based on their specified parameters.

example, the results of the window search above can be filtered by manufacturer, or by product attributes (applicable for a window) such as window type, material, or type of glazing.

There are also filters for design file types (file formats such as RFA, DXF, DWG, DGN, SKP, etc.) as well as content type (such as 2D or 3D design files, product brochures, or product specifications). The detailed products attributes allows users to filter their results in a more granular way (for instance being able to filter based on the height and width of desired window).

Each result is sorted and presented to the user based on the completeness of the content, thus higher quality content with richer descriptions about a product are presented first. The user can click on any item in the list of results to get more detail regarding that specific product, including a product description, a reference link back to the source of the content, a table listing the manufacturer's key product specifications, and the design files and product documentation that are available for downloading.

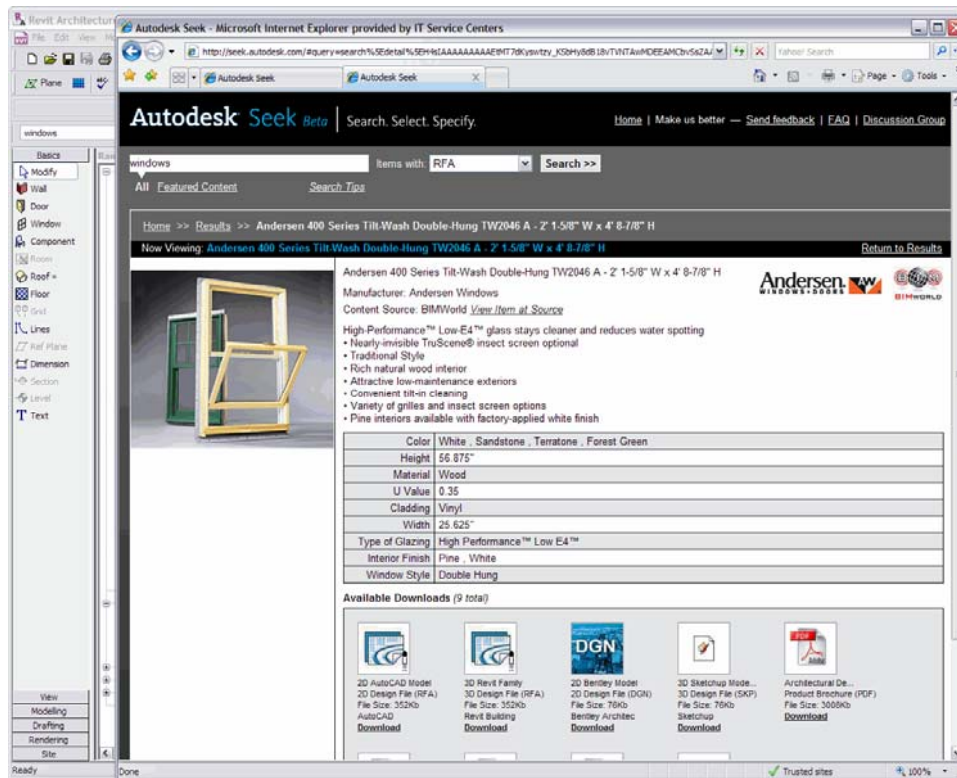


Figure 4:

The user clicks on a product from the list of results to see detailed product information, including the source of the content and the files that are available for downloading.

To download the content in the above example, a user just drags and drops the .rfa design file from the search results directly into the Revit project browser and then inserts an instance of the component into the Revit model.

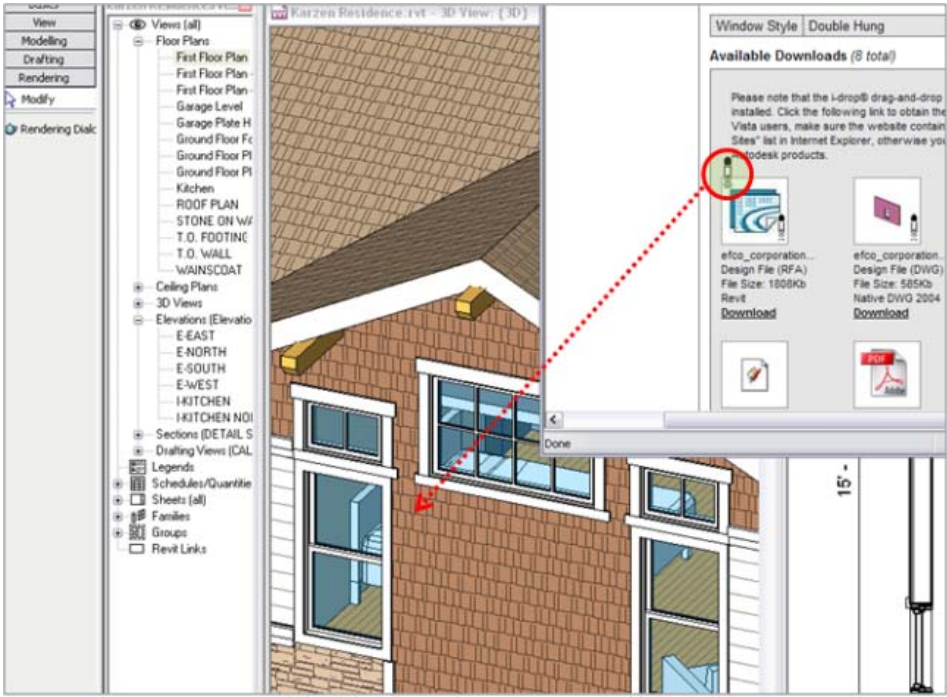


Figure 5:

Once a product is selected, the Revit user drags and drops the Revit design file from the Autodesk Seek browser directly into the Revit project browser and then inserts that component into a Revit model.

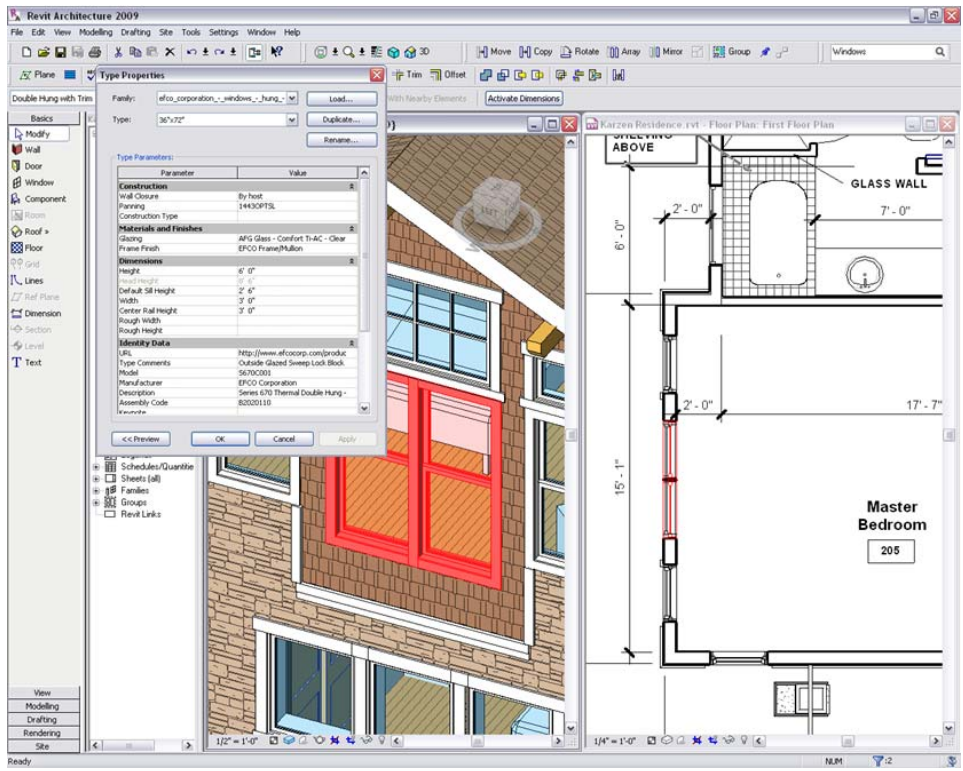


Figure 6:

The manufacturer-specific design files typically contain more detailed product data than their generic counterparts, supporting related design tasks such as visualization or energy analysis.

### Autodesk Seek in Action

Lessard Group ([www.lessardgroup.com](http://www.lessardgroup.com)) is an architectural and urban design firm specializing in residential, commercial and mixed-use developments. Located in Vienna Virginia, it is one of the largest residential design firms in the Washington, D.C.

metropolitan area. Lessard Group has been using Revit® Architecture software for over 3 years and has approximately 30 users—many of whom are now using Autodesk Seek.

“The rich content search capabilities of Autodesk Seek has been a productivity boost for us,” remarks Kal Houhou, Senior Applications Manager for Lessard Group. “We can easily find existing, high-quality BIM content and we’re not wasting time recreating part files for content that already exists.” The firm’s designers can browse for products using specific product criteria, as well as standard AEC industry standard classifications (including MasterFormat 2004, Omniclass 1.0, and Unifomat II). “Our designers rely on the data being communicated by the product manufacturers,” explains Houhou. “With Autodesk Seek, all that product data is displayed in one place, so we don’t have to spend time going to each individual manufacturer or content site to download product information and design files.”

## Summary

Autodesk Seek gives designers a seamless content search experience by combining a powerful search service integrated with their native design environment. Design productivity is improved, enabling designers to quickly find sourcing information for a desired component across a wide variety of manufacturers and product categories. And it’s good for building product manufacturers as well, by allowing detailed information about their products to be more easily found by designers. As Lessard Group’s Houhou puts it, “Autodesk Seek is a like a door that’s now been opened—giving us a consistent, always up-to-date view of all the building products the industry has to offer.”

## About Revit

The Revit platform is Autodesk’s purpose-built solution for building information modeling. Applications such as Revit Architecture, Revit® Structure, and Revit® MEP built on the Revit platform are complete, discipline-specific building design and documentation systems supporting all phases of design and construction documentation. From conceptual studies through the most detailed construction drawings and schedules, applications built on Revit help provide immediate competitive advantage, better coordination, and quality, and can contribute to higher profitability for architects and the rest of the building team.

At the heart of the Revit platform is the Revit parametric change engine, which automatically coordinates changes made anywhere — in model views or drawing sheets, schedules, sections, plans... you name it.

For more information about building information modeling please visit us at <http://www.autodesk.com/bim>. For more information about Revit and the discipline-specific applications built on Revit please visit us at <http://www.autodesk.com/revit>.



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