Autodesk® Revit® Architecture Add-in Efficiency

Adam Simmons - Gensler

AB2536 Have you ever wondered what some practical everyday uses might be for the Autodesk Revit API? This class is designed to explore the many applications that are currently available through Autodesk Exchange. The class will also explore custom-built applications for Revit software as well as mobile applications. This class will focus on how firms can use applications to create an efficient workflow and improve project documentation. Applications are allowing us to rethink the design and documentation process. Participants will leave the class with a list of free applications that they can use to optimize their architectural workflow.

Learning Objectives

At the end of this class, you will be able to:

- Find new apps for Revit 2013
- Use apps to increase project efficiency
- Explain how mobile apps can contribute to architectural workflow
- Describe the possibilities for making custom apps with the Revit API

About the Speaker

Adam Simmons is the South East Regional BIM Manager at Gensler. Adam currently manages eight offices. His experience includes design, production, BIM management, mentoring, coaching, consulting and training. He attended Virginia Tech and was hired out of college to launch a mid-sized firm's conversion to Revit Architecture. Adam's love of Revit, has led him to create a blog and an eBook that focuses on Revit standards. He lives in Reston Virginia.

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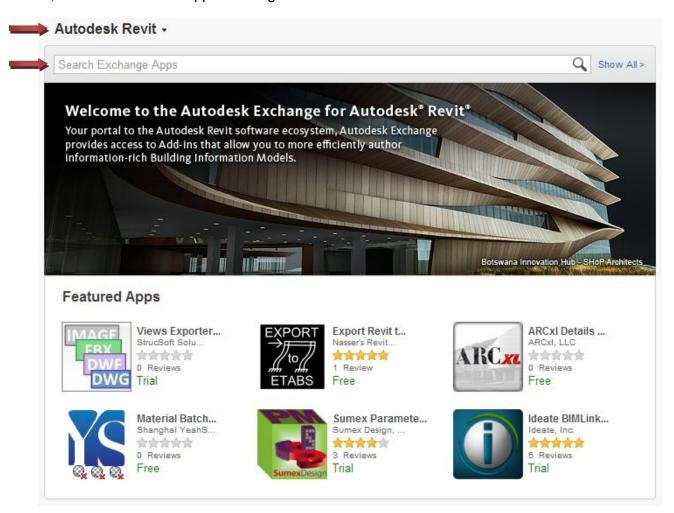
How do I find Add-Ins for Revit?

There are many websites that have attempted to bring about a market in serving up a collection of Add-Ins for Revit. One that has recently taken the center stage is Autodesk Exchange | Apps. We will outline what the features of the site are and explore some Add-Ins for Revit.

Autodesk Exchange | Apps

The Exchange | Apps site offers apps for more than just Revit under the drop down menu at the top of the page. I would like to just take a moment to point out the features of the site.

On the main page for Revit (http://apps.exchange.autodesk.com/RVT/Home) you will find a main panel containing the name of the application you will see Apps for, a search, link to show all, and a few featured Apps showing what is new to the site.



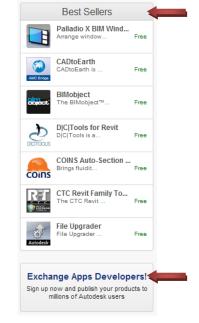


Below the main panel panel you will see some quick links to help you narrow your browsing by choosing predefined categories that list a count of how many Apps there are for each.

Finally, to the right of the main panel you will see a list of best sellers showing the top 7 most downloaded and a link for submitting your very own App to be published on the site. **Apps can be anything a customer will find useful:**

- Plug-ins
- Standalone applications
- Training tutorials
- E-books
- Content
- Etc.

I also want to recognize a very comprehensive listing that seeks to find all Revit Add-ins called **RevitAddOns.blogspot.com**



Revit Add-ons The one-stop resource for Revit add-in applications

What should I know about the install process?

For Revit Add-ins there are two paths that Revit will look for an Add-in. This is important because one will be user specific, meaning only when that user logs in will the Add-in be available. The other will be machine specific, meaning any user who opens Revit on this machine will have it loaded. Those locations are as follows:

Revit 2013 All Users - C:\ProgramData\Autodesk\Revit\Addins\2013 Revit 2013 User Specific - C:\Users\Username\AppData\Roaming\Autodesk\Revit\Addins\2013

Most installs I have encountered from Autodesk do not give a choice and will place it in the user specific location. Often the .addin and .dll required to run the Add-in will both be located in one of these locations. By simply moving those files to the other folder one can easily change who will see the Add-in.

How do I manage deployment of Add-ins on multiple machines?

Currently there is not a refined system for how this should work although, I have seen multiple approaches.

Deployment Methods - A Custom Solution

When the Add-in does not require individual users to enter a key or register a simple approach is to have the related .addin and .dll files for each Add-in to copied to

C:\ProgramData\Autodesk\Revit\Addins\2013 via a logon script that can check for updates upon login (Seek the counsel of your IT). I won't go into the weeds on this one but it can be an effective way to deploy and keep updated.

Deployment Methods - App Providers Solution

The deployment tool is made by the app maker. An example of this solution can be seen in Family Browser by Kiwi codes. They have two options for making a deployment file both using the concept of a silent install to allow deployment to multiple users. The process looks something like this.

- Launch a management console to prepare any needed options for configuration.
- Once configured, choose standard deployment or network deployment.
- Either option allows for silent deployment making it possible to do a push to many computers at once.
 - Standard Deployment via silent install
 - All files are installed to the machine they are run on in the location available for all users on that machine.
 - Updates must be done on each machine via silent install.
 - Network Deployment via silent install
 - All of the necessary files with the exception of the .addin file are installed once in a network location available to all users.
 - The .addin file is installed in the location available to all users on the machine it is run on and points to the network location.
 - Updates can be administered by updating the one network location.





Name: CAD to Earth Price: Free

By: AMC Bridge LLC

Website: www.amcbridge.com

Download Size: 1.3 MB **Install location:** User

Compatible With:

Autodesk Revit 2013

Autodesk Revit Architecture 2013 Autodesk Revit Structure 2013

Concept & Features:

Upload a model directly from modeling session onto Google Earth or Microsoft Virtual Earth Import a section of the surface of the Earth directly from Google Earth into modeling session Position your 3D structure on the imported surface within modeling session and then upload it back to Google Earth or Microsoft Virtual Earth. Perform the same operations on 2D objects in modeling environment and Google Maps.

Ratings

Overall: ★★★☆☆

Pros: Great way to get topography into your Revit model. Bring in a CAD mesh and choose it for topography by CAD, done! Also, converts file to .kmz for upload to Google maps.

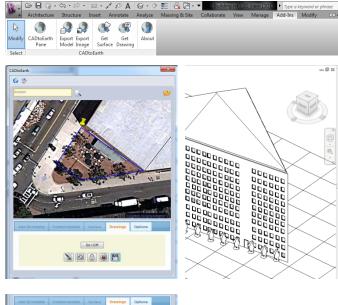
Cons: I had a tough time getting the other features allowing upload to Google maps to work. And the install requires a browser plug-in for Google earth.

Reviews by

The interface is sufficient to get what you need and it's really great to quickly get topo into Revit, but it would be great if it would make the Revit topo instead of CAD. Tools for how to place and align your site and building could make this more precise. -Revit User

Nice tool for users to get the job done but not the most intuitive to figure out. No great way to deploy as it needs a browser plug-in to be installed as well. -BIM Manager

Quick Look





Related

Autodesk Globe Link / Revit Add-Ons: Eagle Point's Siteworks for Revit



Name: DigiPara Elevatorarchitect

Price: Free

By: DigiPara GmbH

Website: www.digipara.com Download Size: 3.8 MB Install location: User

Compatible With:

Autodesk Revit 2013 Autodesk Revit Architecture 2013 Autodesk Revit Structure 2013 Autodesk Revit MEP 2013

Concept & Features:

DigiPara Elevatorarchitect is a free plug-in to create elevator models within Autodesk® Revit® software. It supports Revit users in finding the correct size and number of required elevators and professionally guides them to the point of reaching an optimal 3D Revit model. DigiPara Elevatorarchitect greatly simplifies and enhances the design workflow as the placing and adjustment of single Revit families are eliminated.

Ratings

Overall: ★★★☆☆

Pros: Lots of options to configure to get something in place quick. Most needed possibilities are available. (Custom configuration coming March 2013)

Cons: Each elevator is made of many individual components not one per elevator, but given that this is all managed by the add-in, not such a bad thing.

Reviews by

Great tool! Works well to create what I needed. I can control what floors the elevators stop, what the size of the cab is where the door is located and more! Best of all it keeps the management of each elevator bank in the add-in so it's easy to come back and update.

-Revit User

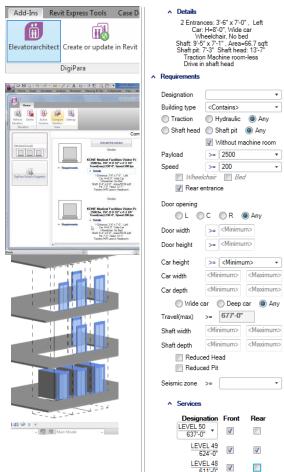
Great tool! Needs better system for deployment as each user needs to have an account. Doesn't do every elevator but fits most common with plenty of configurations.

-BIM Manager

Related

NA

Quick Look





Name: Revit Works Door Factory

Price: \$595 US - \$3,870 US (Based on # of Users)

Bv: Revit Works Ltd

Website: www.revitworks.com Download Size: 10.2 MB Install location: Program Data

Compatible With:

Autodesk Revit 2013

Autodesk Revit Architecture 2013 Autodesk Revit Structure 2013 Autodesk Revit MEP 2013

Concept & Features:

Create almost any door you want in seconds without going into the family editor. The Trial Version has no expiry date but has limited functionality. The Door Factory not only simplifies the creation of doors, it creates doors that are incredibly easy to use. Any Revit user, from novice to expert, can create the doors they need quickly and easily. Save time by creating doors as and when you need them, allowing you to stay focused on your design. Achieve consistency for all the doors in your project.

Ratings

Overall:

Pros: This provides the backbone of creating your own office standard for any door and allows almost infinite customization. Documentation of how the system works so you can customize is explained well for this complex tool.

Cons: Would be nice if you could automate the making of door iterations. But this is an awesome tool!

Reviews by

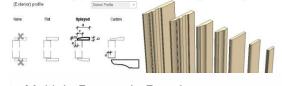
Makes any door I need but I would rather have these doors pre-made so I don't have to configure everything.

-Revit User

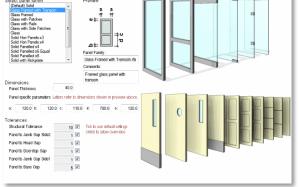
As a tool to develop your own door library this is a must have! Helps maintain standards and is easy to update by rebuilding. Now if it could only automate by a list of doors I want it to pump out from a spread sheet of info. Auto-naming scheme based on door created is needed to let this be used by all users. This way doors can be clearly identified.
-BIM Manager

Quick Look

Multiple Types of Trims and add your own profiles!



Multiple Pre-made Panels and add your own!



Multiple Configurations



Related

Revit Add-Ons: SuperDoor for Revit Architecture / Revit Content: Doors



Name: Family Browser
Price: \$35/user \$250/site
By: Kiwi Codes Solutions Ltd

Website: Download Size: 25.6 MB Install location: User or Everyone

Compatible With:

Autodesk Revit 2013 Autodesk Revit Architecture 2013 Autodesk Revit Structure 2013 Autodesk Revit MEP 2013

Concept & Features:

A family browser with organization 4 levels deep via selection sets, groups, tabs and sub-folders. All families are indexed for simple and advanced search. Once located the families can be dragged and dropped in to the project. Many features surounding maintaining family content are available: GUI for creating/modifing type catalogs, Icon creator, Create DWF, Go to URL, edit and more.

Ratings

Overall: ★★★☆☆

Pros: Setup was easy with wizards to help in deployment. Library organization can be setup in a day or two if you know what you want. Users find what they need quickly.

Cons: The setup of Groups, Tabs and subfolders could be better with a management console (coming soon). Advanced Search can be sluggish on library of 1500+ Families but works fast enough to be useful.

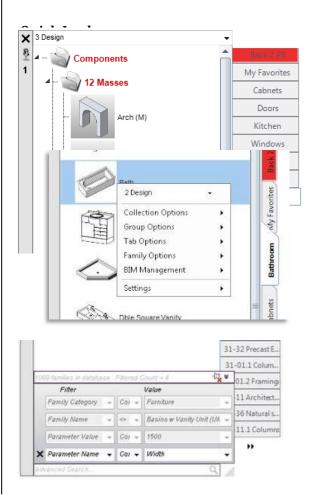
Reviews by

I love having icons and being able to quickly find what I need. Then its just a drag and drop! No wasted time looking through folders.

-Revit User

This is a great way to organize your library for your users small or large! Updates and deployment have been thought out well. I only wish it could tie into family management it has so much more potential. A solid solution and I can't wait to see what they have in store for next year.

-BIM Manager



Related

Revit Add-Ons: Smart Browser - A Free Revit Family Browser / Revit Add-Ons: Kiwi Codes PROJECT Browser 2013 / Revit Add-Ons: Browse and Manage Revit Families with BIMlist



Name: D|C|Tools for Revit

Price: Free **By:** D|C|CADD

Website: www.dccadd.com **Download Size:** 3.5 MB

Install location: User **Compatible With:** Autodesk Revit 2013

Autodesk Revit Architecture 2013

Concept & Features:

These tools include: Room Renumber Tool - Renumbers rooms in the order you select them. You can specify a number to start incrementing from and add prefixes and suffixes to that number. Door Renumber Tool - Allows you to renumber doors by selection order or by the room into which they swing. We also include an option that omits the suffix if a room has only one door swinging into it. Change Case Tool - Text notes can be changed to all upper case, all lower case or you can capitalize every word in the note. Door Parameters Tool This tool updates the "to-room" and "from-room" parameters for every door in the project so your schedules accurately reflect the latest changes to door swing orientation.

Ratings

Overall: ★★★★★

Pros: Offers suffix and prefix options for numbering rooms. Allows for more manual renumbering of doors or an automated based on door swing.

Cons: Certain punctuation can't be used in the prefix or suffix for numbering. If this is needed this might not be the best solution.

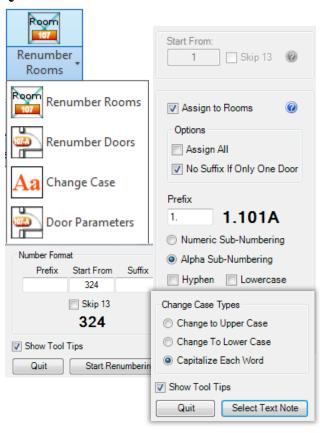
Reviews by

Great set of tools they are easy to use and intuitive. They have tooltips that explains anything you hover over. Makes renumbering easy! -Revit User

DC CADD has done a nice job with an easy to use intuitive interface and more than one workflow to accommodate what level of control you need. This is a must have!

-BIM Manager

Quick Look



Related

Revit Add-Ons: Element Renumber from Kiwi Codes / Revit Add-Ons: Free Room & Door Renumbering Add-in from CTC / Revit Add-Ons: reviTTools



Name: Coins Auto Section Box Price: Free

By: COINS

Website: www.coins-global.com

Download Size: 1.7 MB Install location: User

Compatible With:

Autodesk Revit 2013

Autodesk Revit Architecture 2013 Autodesk Revit Structure 2013 Autodesk Revit MEP 2013

Concept & Features:

The COINS Auto-Section Box tool gives you tremendous speed and agility over managing threedimensional views when analyzing model areas of particular interest. It allows you to quickly create temporary and permanent views to be used for immediate interrogation of the model or for construction document deliverables. This works by allowing you to focus on the model instead of managing views or a view's properties.

Ratings

Overall: ★★★★★

Pros: Add a keyboard shortcut or to the QAT and this tool gives you another level of visual clarity at a moment's notice! The process of creating 3D specific views is now made easy.

Cons: None really... This transforms your workflow! One minor note to create auto section box in a camera view the tool must be activated from a 3d view and then choose the camera view to auto section box.

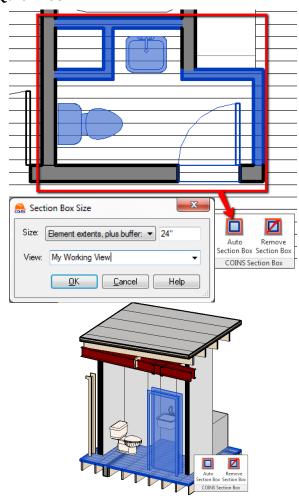
Reviews by

I Love this tool! I wish I could use the same method to make all views plan section or elevation. It eliminates the need to rename a view after you make it. Now if Revit can only get a full tool-set to annotate 3d views for Documentation.. -Revit User

Great tool! Simple but powerful. This really helps users think more three dimensionally. I think this could also be used to help view items with warnings or collision detection areas.

-BIM Manager

Quick Look



Related

Revit Add-Ons: Revit ApplicationStore (Section Box Demo) / Revit Add-Ons: Bounding Box 3D View



Name: Palladio X BIM WindowsLayout

Price: Free

By: Mensch und Maschine acadGraph GmbH

Website: www.acadGraph.de Download Size: 1.6 MB Install location: User

Compatible With:

Autodesk Revit 2013

Autodesk Revit Architecture 2013 Autodesk Revit Structure 2013 Autodesk Revit MEP 2013

Concept & Features:

Using this addin, all open windows can be arranged by a scheme. Contrary to the built-in windows arranging tool which allows you only to tile or cascade windows, PXBIM WindowsLayout assumes that you want the active window to get most of the screen space. You can give 20 to 80 percent of the screen space to the active window while the inactive windows will arrange in the remaining space. Additionally, you can save and restore your window configuration. Optionally, you can decide if you want the rearranged windows to be zoomed in or not.

Ratings

Overall: ★★★★☆

Pros: Quickly adjust the size of all windows while keeping one larger than the rest.

Cons: Needs more layout abilities like saving named view configurations.

Reviews by

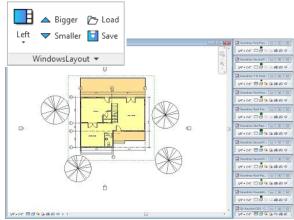
Nice for when you have lots of windows open for a certain task like doors and schedules stairs or even just plan and 3D. It's nice to adjust the ratio. I wish I could make more adjustments for a dual monitor setup like 2 primary views.

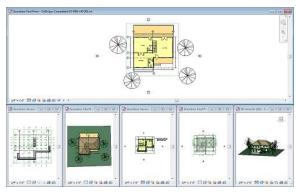
-Revit User

Simple tool nice to use but not a huge benefit unless it can offer view configuration saves. Enabling you to keep the view configuration by a name like "Working on Doors" and it would bring up all views you needed in the same layout.

-BIM Manager

Quick Look





Related

Revit Add-Ons: Zoom To Awesome / Revit Add-Ons: Bounding Box 3D View



Name: Hatch22 Price: Free By: Mertens 3D

Website: www.mertens3d.com/tools

Download Size: 0.29 MB

Install location: Manually place & unblock

Compatible With:

Autodesk Revit 2013

Autodesk Revit Architecture 2011-2013 Autodesk Revit Structure 2011-2013 Autodesk Revit MEP 2011-2013

Concept & Features:

Hatch22 is a free Revit Addin utility that helps you to create model and drafting Fill Patterns/ Hatch Patterns. Line types are added to your project to enable you to draft the pattern you wish to be converted to a .pat model or drafting pattern. Once converted the pattern file can be imported as a custom pattern and applied to materials and filled regions.

Ratings

Overall: ★★★★★

Pros: Relatively easy to create any pattern by simply drafting it. It's easy to combine into one file with a copy/paste feature if you have one standard pattern file.

Cons: You must right click on the addin and dll files to unblock them in the properties menu before they will work.

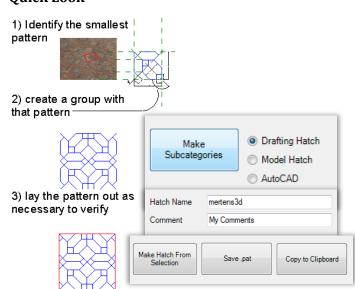
Reviews by

Finally I don't have to be a programmer to make a pattern in Revit! I love the quick flexibility this tool gives. It allows me to get those one off custom patterns by tracing an image to get what I need when I need.

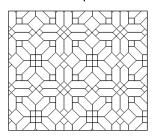
-Revit User

Great tool! Make sure to use the Examples file to understand how to best use this. Great way to create all the patterns you need in Revit and you can easily make updates if you save your drafting view.
-BIM Manager

Quick Look



4) copy the bigger pattern and ungroup. Use this to make a hatch pattern from.



5) try it out

Related

N/A



Name: Delete Views Sheets & Links

Price: Free **By:** Case Apps

Website: apps.case-inc.com Download Size: ? MB Install location: User

Compatible With:

Autodesk Revit 2013 Autodesk Revit Architecture 2013 Autodesk Revit Structure 2013 Autodesk Revit MEP 2013

Concept & Features:

It is a common task to remove as much from a model as possible prior to sharing it with your consultants for the purpose of linking into their model or sometimes you want to lighten up a model that was sent to you for the same purpose. Delete Sheets, Views and Revit Links does just what it says. You can select which of the three options you chose using the provided check-boxes. This tool should only be used on models detached from central as it can be quite destructive.

Ratings

Overall: ★★★☆☆

Pros: Simple and it does what it's called! Plus it's

free!

Cons: Would be nice if it could do more custom prep in case you want to keep certain views or links for coordination. It could be more robust if it is for file exchange.

Reviews by

Works great! would be nice if it also purged all. -Revit User

Great little simple tool. If this were to be made a more robust tool for standards and file exchange it would be quite nice. seems to only touch on what you really need. But great for what it does!
-BIM Manager

Quick Look



Related

Revit Add-Ons: Purge Cads / Revit Add-Ons: Purge CAD Patterns / Revit Add-Ons: eTransmit / Revit Add-Ons: ModelMedic



Name: Change and Replace Line Styles

Price: Free **By:** Case Apps

Website: apps.case-inc.com Download Size: ? MB Install location: User

Compatible With:

Autodesk Revit 2013 Autodesk Revit Architecture 2013 Autodesk Revit Structure 2013 Autodesk Revit MEP 2013

Concept & Features:

Have you ever imported a DWG file into your model and got a bunch of unwanted line styles? Have you ever wanted to quickly change those line styles to your standard styles already loaded into your model? This little guy does just this!

Ratings

Overall: ★★★☆☆

Pros: Another simple but effective tool. Great for cleaning up a file.

Cons: Could be better if you could intercept files

being imported by default

Reviews by

Does what its called. You would think that this would be a standard feature in Revit but oh well, here it is!
-Revit User

Makes for a great tool to clean up unwanted line styles. You know if we could select all in entire project for line types then we wouldn't need this.... until then Thank you Case!

-BIM Manager

Quick Look



Related

Revit Add-Ons: Purge Cads / Revit Add-Ons: Purge CAD Patterns / Revit Add-Ons: eTransmit / Revit Add-Ons: ModelMedic



Name: RTV Xporter Price: \$ 9.99

By: RTV Tools Limited

Website: www.rtvtools.com
Download Size: 31.3 MB

Install location: User or Program Data

Compatible With:

Autodesk Revit 2013 Autodesk Revit Architecture 2013 Autodesk Revit Structure 2013 Autodesk Revit MEP 2013

Concept & Features:

Quickly browse, search and filter Revit® drawing sheets and views using the intuitive RTV Xporter user interface. RTV Xporter's built-in parametric file naming engine automatically saves the exported files to match any company's or project team's file naming conventions with ease. RTV Xporter also supports batch printing to two separate printers simultaneously giving your project teams more time to design and coordinate their BIM projects.

Ratings

Overall: ★★★☆☆

Pros: Refined print / export features including export multiple file types and print to multiple in one pass, plus savable filter settings! Filter is robust with much more flexibility than you see in Revit. Great time saver!

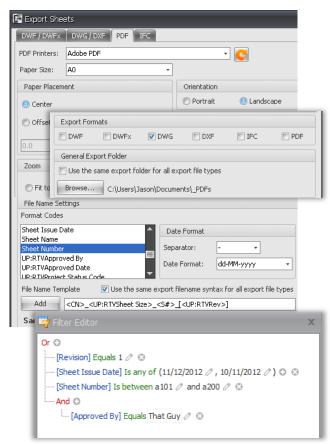
Cons: none so far...

Reviews by

This is a fantastic and cost effective App for Revit which saves a lot of time exporting out views and Sheets to multiple file formats at the same time. Also love the ability to send print jobs to two different print devices at the same time!
-Revit User

Great refining of standard features involving export and print. The ability to create print / export lists by a robust set of filters is worth the \$10! -BIM Manager

Quick Look



Related

Revit Add-Ons: Print to PDF with Bluebeam PDF Revu CAD / Revit Add-Ons: Autodesk Subscription Advantage Packs



Name: AR-media™

Price: € 99.00 Pro Lite / € 249.00 Pro

By: Inglobe Technologies

Website: www.inglobetechnologies.com

Download Size: ? MB

Install location: User or Everyone

Compatible With:

Player for iOS

Plugin for 3ds Max®

Plugin for Scia Engineer Plugin for Vectorworks

Plugin for Maya®

Plugin for Cinema 4D

Concept & Features:

Simply stated, the Augmented Reality technology allows users to visualize their 3D creations directly in the real physical space which surrounds them. Models can be visualized out of the digital workspace directly on users' desktop or in any physical location, by connecting a simple webcam and by printing a suitable marker. Geo-located models for iOS devices:NEW: you can now use iOS Player to display virtual models in the real world without any marker. With support for animations, shadows, clipping planes and more.

Ratings

Overall: ★★★★☆

Pros: Great tool for getting a real context for your design whatever it may be. Easy to use and share with others. You can use markers or place something via geo-location making it possible to visualize a building on site just by sending an email to your iPad.

Cons: No direct conversion from Revit (said to be coming by AR-media)

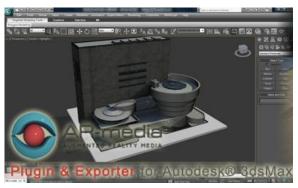
Reviews by

No export from Revit, really? Other than that kinda fun to play with! Great for client at design stage. if you know max it can be really cool for animations. -Revit User

A cool tool to get design intent in context. iPad + free app + Max or sketch-up + plugin + Revit = more legwork than needed if you intend to do this on the fly for quick studies. I like that you can make your own custom markers.

-BIM Manager

Quick Look





Related

Revit Add-Ons: Augmented Reality for Autodesk Showcase

Other Apps Worth a Look

Because I couldn't review them all...

Name: RTV Paint, Parameter Manager, Drawing Manager & Reporter

By: RTV Tools Limited

Website: www.rtvtools.com

Name: CAD Faster By: BIM Mobility

Website: www.cadfaster.com

Name: Sumex Parameter Manager

By: Sumex Design, Inc.

Website: www.sumexdesign.com

Name: Blue Beam PDF

By: Bluebeam

Website: www.bluebeam.com/us/products/revu/pdf-creation.asp

Name: CTC Revit Excel Link, CTC Revit Family Tools

By: CTC, Inc

Website: www.RevitExpressTools.com

Name: ModelMedic

By: DC CADD

Website: www.modelmedic.com

Name: Revit Tool Kit

By: CADsoft

Website: www.cadsoft-consult.com

Name: Keynote Browser, Project Browser, Family Categorizer, Element Renumber, Sheet Counter

By: Kiwi Codes

Website: www.kiwicodes.com