Some Autodesk® Revit® Clarification

CAD Trainer Guy

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To my friends and customers confused by this whole Revit tsunami,
Let me start by saying I am not a Revit expert. I did, however, work in the architectural field for four years in the Bay Area (1978 – 1982) with Bechtel in San Francisco & Riyadh, and with E|L|S in Berkeley, so I am very familiar with the breadth and scope of the industry and the extensive documentation required for the construction of the built environment. [B. Architecture, University of Cincinnati/DAA, 1978].

But as an educator, I feel I need to address the huge understanding-gap that exists between the proponents of Revit and those of us who haven't gotten the memo that Revit will, ostensibly, cure world hunger. (OK, slight exaggeration, but that's what they want us to think.)

Turn It Upside Down and Shake It
A customer had this superb analogy for what her company does, and I think it can be applied rather broadly to the office furniture industry: Turn a building upside down and shake it. What falls out is what furniture dealers (and their related industries) are typically responsible for.

What's left can be done in Revit (as well as Revit LT™).

What Is It?
Specifically, Revit is another product from Autodesk®, albeit developed exclusively for the AEC community of design professionals. It's for the folks who have those green Sweets catalogs sitting along the window because they need to reference all the various disciplines involved with construction.

> **Official Autodesk Description of Revit Products**
> *Autodesk® Revit® software is specifically built for Building Information Modeling (BIM), helping building professionals design, build, and maintain higher-quality, more energy-efficient buildings. Autodesk Revit is now available as an application that combines the capabilities of Autodesk® Revit® Architecture, Autodesk® Revit® MEP, and Autodesk® Revit® Structure software.*

BIM
Building Information Management is what Revit – and to a lesser extent Autodesk AutoCAD Architecture – excels at. It highlights structural conflicts, keeps track of all placements of every single door and window so you can make schedules, automatically creates a 3D view as you draw your building, has oodles of different wall, door, and window types you can choose from, ceiling conditions, structural components ... basically anything from the Sweets catalog and its related disciplines, you can put it all together using Revit.

Furniture & Revit?
The word 'furniture' is not relevant to 'Building Information Modeling'. And yet every architect thinks that furniture manufacturers and dealers need to use Revit because furniture goes in a building, therefore, every furniture component needs to be available in Revit. Immediately. Consequently, untold hundreds of thousands of dollars are being spent by furniture manufacturers to get their product on Revit ... to make the AEC community and architects happy.

Granted, there will imminently be benefits to having furniture libraries available to them, but the reason for the anxiety and frantic requests for Revit-compliance escapes me.

It seems that those beating the Revit drum don't realize - or have chosen to ignore - the fact that ANYTHING you create in AutoCAD can be imported into Revit. They're both made by Autodesk, so you can take AutoCAD stuff to Revit and Revit stuff to AutoCAD. Any 3D cluster of furniture can be brought into Revit and it looks absolutely perfect. The AutoCAD 3D components don't have attributes and intelligence, but isn't the point of the exercise to simply see how the furniture will ultimately fit into the space? The only thing that may be useful in Revit which is not being imported, may be to have the CMF for the furniture, but that can be mapped to the components after the import.

Revit Architecture vs. Revit LT

In September 2012, Autodesk released Autodesk® Revit LT™. This release acknowledges the simple fact that there are numerous applications and industries where the power of BIM is useful … but all the bells and whistles aren't. And one of the most attractive differences is the price!

Primary Differences between Revit Architecture ($5,700+) and Revit LT ($1,200)

Revit LT – Not intended for collaboration in the same project files simultaneously with others …
Revit LT – Does not contain energy or structural analysis tools …
Revit LT – Cannot work with third-party/external applications developed for Revit …
Revit LT – Rendering is done from the Cloud with a Subscription, just not from within the software …

This is great news for the smaller dealerships who need to respond to an RFP or make a proposal where Revit is a required component on the project, but can't afford the nearly $6,000 for the software. Also, if you buy Revit LT, you can upgrade at a later time and not lose the cost of your original investment.

Architectural Walls with Revit

There are several companies as well as major contract furniture players that are developing or have developed applications that can 'plug in' to Revit. On the furniture side, these applications are mostly for the Architectural Walls component of the interior space. Therefore, to be able to incorporate these new products into a Revit drawing, you would need the full Autodesk Revit Architecture software, not Revit LT.

Revit Training from the CAD Trainer Guy

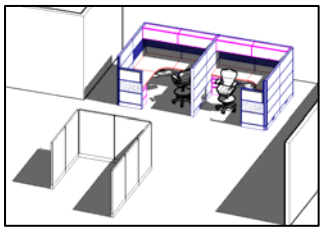
So, in an effort to help all my 'kids' scattered around the planet, I now have a *Revit for Dealership Designers* seminar for dealerships who find themselves being forced into becoming familiar with the program. This training is applicable to both Revit Architecture and Revit LT. The fundamental topics we cover are identical in both versions (just like they are in AutoCAD and AutoCAD LT).

The seminar is one-day reviewing the fundamentals of how to create a floorplan, along with coverage of all the underlying principles and the relationship with our AutoCAD/CAP/Z-Axis/ProjectMatrix drawings. We also cover the loading and inserting of furniture families, just so you understand how that works.

Now that this Revit monster has crashed into our daily activities, and incomplete bits of information are being flung at my customers, I really have to do something to allow everyone to breathe a wee bit easier.

Insights & Need-To-Know

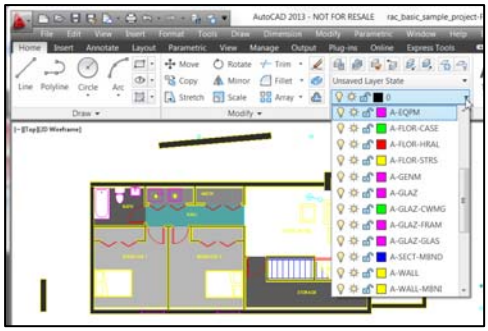
Here are some bullet points for your own reference regarding Revit. I'll start with the simple ones that have to do with exchanging drawings with Revit users.



YES, the Revit user can import your DWG into Revit [*Insert* tab >*Import* panel >*Import CAD*].

YES, Revit can view and manipulate - Move, Copy, Rotate, etc. - 3D furniture blocks from, for example, CAP Designer and looks. Just. Perfect. (See figure at right from Revit)

Furniture intelligence (attribute information) does not translate.



YES, Revit can export a 2D *.DWG* **if** the Level is set to a Plan view in Revit prior to exporting the drawing [Application menu >*Export* >*CAD Formats* >*DWG*]. The DWG can then be opened and viewed in AutoCAD and looks. Just. Perfect. (See figure at left from AutoCAD)

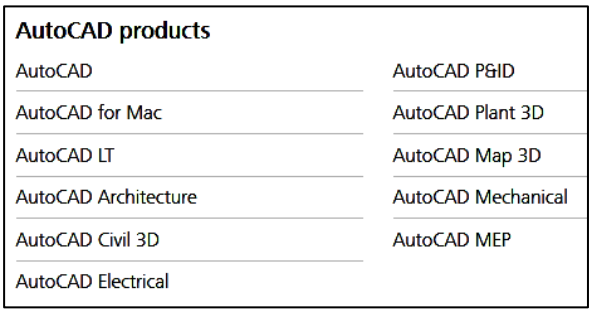
Please note: If the Revit user knows how to set the drawing to the requested floor Level, they can – if they feel so inclined – provide the dealership with a 2D .DWG file that opens just perfectly in AutoCAD.

That's the very simple thrust of this whole discussion: Can Revit files and AutoCAD files play well with one another? Absolutely!

A.. AUTOCAD IS NOT GOING AWAY

On the contrary. Autodesk rebranded the former 'Desktop' products to take advantage of the 'AutoCAD' recognition.

Universities who have chosen to discontinue their AutoCAD programs are **drastically** reducing the professional marketability of their graduates.



B.. REVIT IS NOT USED ON EVERY ARCHITECT'S PROJECT

- John Wayne International Airport: Revit Architecture – (1990)
- San Jose International Airport: AutoCAD Architecture – (2010)
  [Both projects by Gensler]
- Dallas Love Field Modernization: AutoCAD Architecture & Revit Architecture – (2013)

C.. THE REVIT LEARNING CURVE IS VERY STEEP, BUT I DO HAVE FRIENDS I CAN RECOMMEND.

I sincerely hope that dispels some of the mystery surrounding Revit. If you have any other questions, I'm here if you need me!

Blessings to one and all,

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AUTODESK.
Authorized Author

Give instruction to a wise man, and he will be still wiser; Teach a just man, and he will increase in learning.
-Proverbs 9:9