Helpful Tips for Switching from AutoCAD® to Revit®

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I will share ideas, workflows and techniques which I have learned from hosting years of Round Table discussions to help make for a smoother and less painful transition from Autodesk AutoCAD® (hand drawing or other drafting software) to Revit Architecture®.
I hope to share with you the successes and failures I have heard about over these past 15 years learning, using and teaching Revit Architecture.
You may have heard that the only way to switch to using Revit is to just dive right in and take the plunge.   Well maybe there are options to this *"sink or swim"* approach.   Can you afford to re-train your entire staff? Do you know who should learn (or more importantly, who should not learn) Revit?   Well maybe this discussion will help answer some of your questions and address some of your fears.
I will share with you how switching to Revit as affected offices, individuals, workflows, staffing, billing and efficiency. I will share some of the biggest successes and failures I have run into. I also want to hear about any unique ideas or work flows which you have discovered to help make for a successful transition to Revit. We will hopefully share our personal experiences, knowledge and advice with anybody who is considering, but who has not yet made the move to Revit. Together as a group, I will share how you can make the switch to Revit while putting some common fears and myths to rest.

Class Goals:

• Discuss and compare various approaches to successfully transitioning from AutoCAD to Revit.

• Demonstrate various methods, ideas and workflows which take advantage of Revit's strengths while incorporating some of your firm's (and your Consultant's) AutoCAD-based documentation and files.

• Who really should be learning and using Revit in your office?

• What is the best way to learn Revit, or more importantly, how do you get your staff to *want* to learn Revit?

• Help you benefit from other's successes and failures.

About the Speaker
Steven C. Shell graduated from the University of Arizona in 1982, and has had his own architectural firm in Tucson, Arizona for over 31 years. He has been using Revit Architecture® exclusively for over 16 years and is the co-founder and co-chair of the Southern Arizona Revit Users Group. Mr. Shell is certified by Autodesk in Revit Architecture. He was a "Top Rated Speaker" at Autodesk University in 2015 & 2017 and lectures at the University of Arizona's College of Architecture. He is an Adjunct Professor at Pima Community College. He has presented at all of the BIM Workshops and has been the Top Rated speaker at most of them.   He has presented at Midwest University and 8 Revit Technology Conferences (US, Canada, Australia & Europe), where his classes are always voted in the top 5 and he was the Top Rated Speaker in Europe.

Class Discussion Outline:

We will discuss how switching to Revit impacts your office's production workflow, staffing and efficiency.   After we have discussed these basic topics, we will look at some specific ways to maximize efficiency while simplifying the transition by seeing how others have successfully learned some very workable methods to incorporate AutoCAD into Revit. (Warning: Some of these approaches may drive your local Revit guru or BIM Manager over the edge.)

This class will be a round table discussion, moderated by myself.   The discussion will follow this class outline and we will all share our thoughts and experiences on each topic of discussion.   Please remember, your individual participation is vital to the overall success of this discussion as there will be many in attendance who have not yet made the switch from AutoCAD. Many 'not-yet-Revit' users will be here looking for guidance and answers which will help them with the transition as well as being able to take the ideas discussed here back to their offices and firms in order to share what they have learned with their colleges.

Hopefully, the more experienced Revit users will also get something out of this discussion. I hope that we hear other proven ideas, opinions, workflows and experiences from other experienced Revit users which we may not have thought of or experienced. I hope that we all can benefit and take advantage of our group's communal knowledge and experience regarding each of our good and bad experiences as we discuss this complex issue.

Discussion Topic 1:

How many people work in your office?

How long have you been using Revit?

What percentage of your work is produced in:

    Revit?

    AutoCAD?

    Other?

Discussion Topic 2:

Is Revit really better for what you do?

How has Revit affected your office?

       Staffing

       Management

       Financially

Discussion Topic 3:

Making the switch to Revit: Best approach

       Sink or swim?

       One foot in the water…a gradual approach?

Discussion Topic 4:

Who should learn Revit (and who should *not* learn Revit)?

How should they learn it?

       Professional Training

       In-house Program

       Individual Self Training

Discussion Topic 5:

AutoCAD in a Revit office?

       None: Pure Revit, never looking back with no regrets

       Maybe: Just temporarily, until we master Revit

       Minimal: Imported backgrounds and 2D details only

       Integrated: Revit for Design & AutoCAD for Working Drawings

Discussion Topic 6:

Based on your experience, what has been your biggest::

Success?

Failure?

As you know, Round Table classes can be extremely informative and helpful; however, unless you are taking notes, you go home or back to your office empty handed and not able to share what you may have learned.

It is for this reason that I am including this brief overview of some of the key topics we will be discussing and sharing. I have identified some of the key issues which I have encountered after having used Revit personally for over 16 years, presenting this class for the past 7 years at various conferences, helping Architects and firms make the transition to Revit, helping educators learn how to use and teach Revit, introducing Revit to Contractors, Facility Managers and Owners as well as just offering helpful advice to friends and classmates who are struggling with this.

First Discussion Topic in your Office: "The Ground Rules"

These are some of the most important issues to discuss within your office *before* you ever make the decision to switch to Revit from whichever method you currently utilize to produce your work.

- Software knowledge vs Professional knowledge
- Level of management's commitment and project involvement
- Firm size and staff structure will impact how you use Revit
- Why are you doing this?
- How to begin

Management and Staff should talk about these issues *together* so that everybody within the office fully understands what is involved in this effort and understands each individual's responsibilities, goals and expectations.

- **Software knowledge vs Professional knowledge**

When a mistake was made…

- o Was it a Revit issue?
- o Was it due to a person's lack of knowledge or skill?

When using Revit, you should *model it the way you build it*.   But, here is the problem. How can we expect an inexperienced staff member to model something in the computer when

they don't know how it goes together in the real world? This is probably one of the biggest issues we have to deal with when considering making the switch to Revit. It is also why some of us view Revit as a 'game changer' which completely changes how Architects and Engineers do their job. Some even call Revit a "disruptive technology".

- **Level of management's commitment and project involvement**

As we all know, leadership starts at the top. This means that management needs to be patient, positive and supportive during this transition.   They need to have realistic expectations and not give up or loose motivation the first time a deadline is missed or mistakes are made.   This is so important for a successful transition.

Management, including Principals, need to be fully committed to this effort after completely understanding and more importantly, *accepting the "Ground Rules"*.

- **Firm size and staff structure will impact how you use Revit**

    o   Office Size: (Number of Staff)

    o   Staff Structure: (Professional Development and Skill Levels within the firm)

- **Why are you doing this?**

Do you *want* to switch to Revit or do you *have* to switch to Revit?

Why would anybody be willing to abandon time honored and trusted business practices in an effort to learn a completely new way of doing business?

Why would anybody be willing to take such a risk when it impacts one's livelihood and ability to care for one's family?

- **How to begin?**

    Picking the first project

    How management and staff evaluate Revit's abilities will usually be based on your first project using Revit. This initial impression will probably be the only opportunity allowed by management to evaluate the merits of switching to Revit.

For this reason, it is critical that you pick the right project to start out with. *We do not always have the benefit of being able to pick and choose our next project; however, we have the ability to choose **how** we do it.*

Pick the right team and the best leader

Assembling the first Revit team is fairly straight forward. You first need to look around your office and see who really *wants* to do it. Then focus on picking the people within your firm who have the most experience with the type of project you select as your first Revit project. This is usually the best way to select your first team.

Selecting the right individual(s) to lead your first Revit project is a bit more complicated and requires a lot more thought. The obvious place to start is by looking for a Revit leader from within your own firm; however, *the obvious choice is not always best.*

Share the experience

You may have started your journey towards becoming a Revit & BIM office with only a few key individuals; however, the rest of your management team and staff need to be included in the experience so that they can also learn and benefit from this first Revit effort. They all need to see what Revit was capable in achieving (or not achieving) as well as seeing how easy (or difficult) it was to learn. *After all, isn't the goal here to have every single individual in the office want to learn Revit on some level?*

How to motivate and convince others to want to learn Revit

Successfully motivating and convincing others in the office to want to learn Revit is not a simple task. Most of the people in your office have been extremely productive using whichever software you have been using for the past two decades.

It is also safe to assume that some of the managers and staff in your firm have achieved significant success due to their unique ability to master the old software as well as managing and teaching it to new employees. These traditional CAD Managers and experts are usually the hardest individuals to convince that Revit may be better than whichever software they are currently using.

In order to successfully motivate and convince an individual, it helps to understands the basic human characteristics and behavior. Revit requires a person to make it work!

Demonstrate and explain Revit's abilities to everybody in the office

How to learn Revit

These are the most common ways to learn Revit

Professional 3 to 5 day training sessions

This approach is very common and is usually offered by a qualified Autodesk reseller, a company specializing in software training as well as individual professional consultants.

Typically, students come away with a good 'working' knowledge of Revit; however, there is a lot left to learn. In addition, there is a big difference between being taught Revit by an Architect or Designer who uses Revit vs being taught by a professional software educator.

Community College or Technical Trade School

This approach is used more by individuals before they are hired by a firm since it represents a significant time commitment not usually offered by an employer. Students completing a semester or multi-semester program have a good working knowledge of the software; however, still lack the professional applications of Revit.

In-House Training and Mentoring

This approach usually provides very good results; however, can fall short of your expectations if you don't have a really knowledgeable Revit user who is familiar with all of the tools which are available in Revit. In addition, your Revit expert may not be a good teacher.

Self-Taught

This approach may be the most appealing to firms since they don't have to pay for training; however, learning on one's own (by watching videos on You Tube and reading on-line

thread boards) may lead to bad Revit practices and not learning many of Revit's fundamental concepts of how to properly use the program.

The method preferred by most firms

In summary, learning Revit is not easy nor is there just one "best" way to learn it. What many have learned is that there needs to be *some* sort of professional training which teaches basic proper Revit principals, followed by an in-house, hands-on learning period working on a project with other Revit users so that they can all learn from each other as well as from the Revit expert in the office.

No matter what approach you choose, everybody agrees that it is critical that any training needs to be followed by immediately working on a project using Revit so that the training is fresh in the user's mind and that the user does not forget what he or she just learned.

Who should learn Revit and why?

Principals and Upper Level Management

Good working knowledge of what Revit is capable of. They should be taught how Revit will affect production as well as impact their business practices.

Designers, Project Managers and Job Captains

Depending on your office's staffing, Designers and Project Managers (or Job Captains) should have a complete working knowledge of Revit and should be able to use it on a daily basis.

Again, depending on how your office is set up, some Designers may or may not need to know every aspect of Revit.

Production Staff (Draftspersons)

No longer a fan of the title "Draftsperson" or "Drafter" since Revit is not a drafting program; however, everybody in office who actually produce the Construction Documents should be totally knowledgeable on every aspect of Revit.

Implementing Revit

Can AutoCAD live in a Revit & BIM office?

Not at all

Revit only. (No AutoCAD allowed, at all, ever again, no exceptions)

Limited

Just temporarily until we master Revit

Revit for Design & AutoCAD for Working Drawings

Some use Revit, the rest use AutoCAD

Integrated

Imported background drawings and 2D non-model based standard details only

(This is probably the most common and preferred method of incorporating AutoCAD into a Revit based work flow.)

There is no spoon   (A very unconventional approach)

Warning! This will absolutely drive any Revit and BIM Manager right out of his or her mind.

There is no Revit model.   Only use imported AutoCAD files placed in the appropriate Revit views and only use Revit to organize the set of drawings.   (Believe it or not, there are some times when this is the very *best* approach.

Thank you very

I hope that you have heard some new ideas, methods, opinions and ways to help you and your office transition from AutoCAD toward a more productive 3D - Building Information Model (BIM) and Revit based workflow which will insure your place in the future.

Thank you and good luck!

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