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The Official Publication of Autodesk User Group International

August 2018

# Tools & Techniques To Help Us Collaborate

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- The New BIM Design
- Meeting Etiquette for Project Managers
- Collaboration in the Cloud



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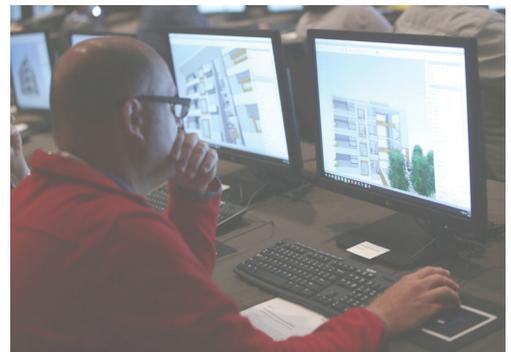
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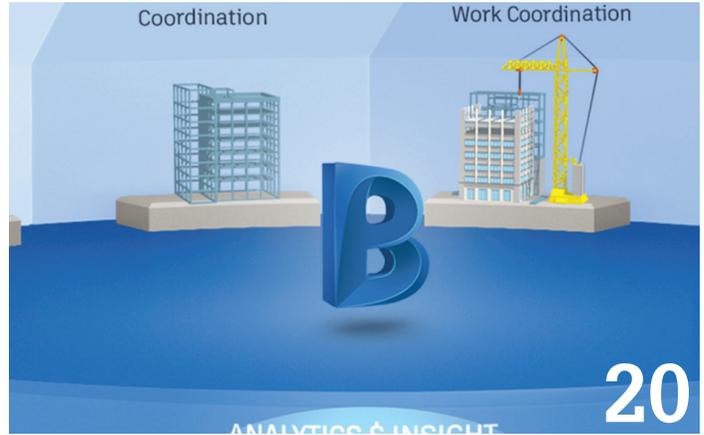


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# Letter from the President



# AUGI

**I**'m taking a bit of a detour from my usual themes this month to talk about online security. With practically every website these days wanting you to create an account for access, it's important to manage those accounts effectively—and to protect yourself against people trying to steal your credentials or information. (I'm not going to get into *why* these websites want your data and whether you should give it to them. Let's just stipulate that there can be good reasons to create an account somewhere, and leave it at that for today.)

Until recently, I've always been pretty good with passwords. I might not have the *best* habits, but my passwords usually are strong and I can usually remember which one goes with which account. (Did you catch those qualifiers? "Usually" and "until recently" should tell you where this is going.) Last week, I was trying to log in to one of the (many) online accounts that I need for my work, and got the dreaded message: "We're sorry. Your account has been temporarily locked due to too many incorrect attempts to log in. Please wait 30 minutes and try again." And, sad to say, this wasn't the first time it had happened.

I like to think I have a pretty good memory, but that latest lock-out was the last straw. With the increased complexity—and frequent changes—required by many service providers, I have to admit that I can't keep up by myself anymore. So I finally caved, and set up a password manager.

Can I just say...what on earth was I waiting for? It was super-easy to set up, and now my vaults—one for my personal email, one for work—are ready to keep all my important data safe, secure, and available whenever I need them. If you haven't made this leap yet, just do it! There are several reputable (and free!) solutions out there—pick one that will work for you and go get it.

Once you have an account somewhere, it's almost a guarantee that someone will try to steal your credentials—and one of the most popular targeting methods is "phishing" via email. "Phishing" refers to the practice by scammers of sending emails that pretend to be from legitimate companies to try to get you to surrender personal data such as passwords or financial information. You may also have heard of "spear-phishing," which means phishing email that include personalized fields, like a greeting line with your name in it.

My company is actually working on combating this right now by running email security training. I'm happy to say that it's going well—there are only a couple of people that still click on links in suspicious emails (but we're working on that!). I always thought I was pretty good at phish-spotting, but this training has made me more vigilant. Here are some "red flags" we've been taught to look for:

- *Am I expecting this email?* A lot of the phishing I see involves links to download or sign online documents. If you're not expecting a document, don't click the link.
- *Is it in character for the sender to write an email like this?* Phishing emails often include grammar and spelling errors, or content that's just plain odd. If you want to verify the email, call the sender.
- *Do the URLs look legitimate?* Hover over a link before you click on it to see if the address matches the link text. And remember, most companies will never ask you to submit personal data or credentials via email.

There are more factors than I've listed here (search for "email red flags"), but these are the ones I have found most helpful in identifying phishing emails.

One last thing before I wrap up: Have you registered yet for Autodesk University Las Vegas? Passes are available now, and registration opens August 8. You'll want to circle that on your calendar to get into the sessions you want...and don't forget the AUGI Annual Meeting! If you've attended one of the global AU events, I'd love to hear what that experience is like (since I've never been to an AU outside the US). You can reach me at [president@augi.com](mailto:president@augi.com).

Now, go get that password manager!

Kate Morrival  
AUGI President

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NEWSLETTER



# Collaboration in Coordination

**T**ime again for my annual, or so it seems, article on the status of collaboration. This year I want to focus on collaboration as it relates to coordination in the construction industry, as this is the work world I currently live in. Sometimes people use Coordination and Collaboration interchangeably, but they shouldn't. Coordination is a process or workflow, while collaboration is the underlying basis of that process.

The definition that best fits the coordination process is a "cooperative effort resulting in an effective relationship." The definition for collaboration is the "action of working with someone to produce or create something." So, with these in mind, let's go.

## THE START

The only way that collaboration works in the coordination process is if it is implemented at the beginning of the project. A project kickoff meeting, with ALL players, is critical to the success of this process. You need to have representation from every discipline that is going to require coordination, and those representatives should be the people who are going to be involved in the process throughout the project life.

The overall project coordinator needs to set project expectations at this meeting. Everyone involved needs to know the coordination schedule, what format the uploads needs to be, where the uploads are happening, and how often the uploads are to be done.

Not having these simple items in place can cause major headaches. If a schedule isn't produced, no one is working to a goal. If the format isn't provided, you will receive any and every format, and no consistency. If you don't set a scheduled upload time and location, you won't be ready for your weekly meetings. Without having these things in place, the overall project coordinator spends more time chasing down models instead of clashing the models to reduce issues in the field.

Another critical part is having a BIM Execution Plan (BIMxP) upfront that lays out all the pertinent information. There are complex BIMxPs that can be 50 pages while others don't contain the proper information. But there is a happy middle ground—BIMxPs that contain the pertinent information, but don't overload

the information. You can't account for every piece of information or situation, so don't try to do that in a BIMxP.

## TALKING THE TALK, BUT NOT WALKING THE WALK

Many people in the industry know all the buzz words—BIM, clash detection, coordination workflow, deliverables, etc.—but don't know what they actually mean or the software that accomplishes these tasks.

This becomes quickly apparent after you leave the kickoff meeting and begin the process. Often these things are brought to light by comments like, "I need this BIM'd up" or referring to everything as "The BIM" and not comments about the workflow or the product being delivered.

Another part of this is knowing the software that is required to complete this coordination process. Just because you know pertinent terms doesn't mean you understand the software and the process. That is why it is important to have the people completing the coordination effort to be at the meeting and to become familiar with all the other players. I have seen many kickoff meetings that only contain the company's BIM managers, who may guide the overarching process for their company, but won't be putting the modeling effort into the project.

## WE AREN'T MIND READERS

There needs to be open collaboration between all disciplines throughout the entire process. Often staff in one discipline has an issue they need to resolve, and they are given direction on how to proceed, but when staff in the other disciplines aren't hearing the same instructions they may think that space is available for their geometry. When this happens, rework almost always happens, and the last thing staff in any discipline wants to do is remodel in a coordination process. There isn't anything more frustrating when you believe you have avoided all other trades, only to find out someone was given direction to occupy the space you are in.

There is another area where minds can't be read: during the population phase of the overall coordination process. All disciplines

need to be populating and coordinating the same areas, at the same time, and then proceed to the next area. If all disciplines aren't in the same area, then unrealistic space is available for whomever arrives first. Often disciplines get pushed around due to construction schedules and what areas are available for installation, but we need to be careful to not be fully driven by what is happening in the field.

In a perfect world, design would be completed, coordination would be started, and as those areas are complete, construction would begin—but we all know we do not live in that world. Often the process is: design isn't complete, coordination is all over the place, and construction is building on the opposite side of the site.

There needs to be give and take, but a discussion upfront of which discipline takes priority and where are those areas most critical to the overall construction schedule would help the overall coordination process to be more streamlined. Bottom line, all players need to be on the same page of the coordination process.

## CLEAR INSTRUCTIONS

A typical coordination meeting is usually a mix of people on site and some form of web presence meeting. During these meetings many different things may be discussed, and without fail, one person hears something, and another hears something completely different.

It is of utmost importance that these meetings are followed up by written instructions that list who was involved in the call, what the general discussion was about, specific tasks that were assigned, critical clashes that need resolved, and when these things are due. This simple meeting minute process will help to keep everyone on the same page as well as shed light on misunderstandings by all involved. The meeting minutes need to be produced quickly and efficiently after the conclusion of the meeting, so people aren't working under assumptions. The turnaround time must be even quicker if you are holding a weekly meeting.

Along with the overall weekly meeting, if there are individual trade meetings, there should be meeting minutes produced from that to share with the rest of the group that is doing coordination. Just because the issue may not seem to interfere with other disciplines, it could, and this will prevent lots of rework if it does.

## TIMELY RESPONSES

In our current technological age, it seems some processes are still antiquated. The infamous "Request for Information" can be the absolute death to the coordination process. We can now leverage technology to give us more information than we have ever had in the design and construction process, but it can still take weeks or even more to get simple responses. One of the end products of coordination is to minimize the RFIs, so why isn't the process also speeding up the response to these RFIs? I think it is a two-fold problem.

The first issue is that way too often we don't include the design team, or the design team doesn't want to be involved in the

coordination process. In short, we chose not to collaborate with the group who came up with the initial idea. Why would we not want the people that came up with the design to be involved in making their design come to a reality? If they are involved in the weekly coordination meetings, they can see what the issues are and what the changes need to be, to be constructible, which will mean that the RFIs can be answered in a quicker fashion.

The second issue is we tend to go back to the old way and submit 2D information on the RFIs and it isn't always easy to understand why the change is necessary. If we utilize the models we are coordinating it is much easier to get a better picture and understand the implications of current design versus a different routing.

If we keep these two things in mind when working through coordination, I believe the process could be made smoother and have a quicker response.

## THE FINISH

Is this list exhaustive? Of course not. Is everyone's opinion going to be the same? Nope. Will I still have more to write about on collaboration next year? Absolutely!

I like to believe that we all want the same thing: delivering the best product possible for the clients, while saving time and money in our process. I believe that collaboration is a big part of that.

If we work on some of the things I have laid out in this article, I believe we will all see a marked improvement in the coordination process. Whether it is making sure all parties are at the table from the very beginning, or that they are following a good BIMxP, or not just talking the talk, but walking it as well, trying to be on the same page so we don't have to read minds and looking for quicker input from the design team, they all have a common tool, and that is collaboration.

Lastly, don't be afraid to speak up, ask questions, and share thoughts when you see collaboration disappearing from coordination. If you are struggling with it, chances are someone else is, too. We are to work as a team to accomplish our goals and we can only coordinate as well as our weakest link.

Until next time... happy collaborating!



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# Autodesk: Collaboration in the Cloud

**I**f you are an AUGI member, I would hope that you are already using Autodesk products, but have you seen some of the new cloud/collaboration enhancements Autodesk has provided recently? Autodesk is transitioning quickly into the cloud to make collaboration with your team, clients, and contractors quick, easy, and productive.

One of the more obvious changes is on the AutoCAD Quick Access Toolbar. In the recent AutoCAD® 2019 release, there are two new icons: **Open from Web & Mobile** and **Save to Web & Mobile**. When either of these is used for the first time, you will need to install a small download to enable them. That's a one-off

install, and then (provided you are logged in to your Autodesk account through AutoCAD), you can save to AutoCAD Web and the AutoCAD mobile app to your heart's content. Basically, you are saving to the cloud in your A360 Drive, which is linked to your Autodesk account (sometimes known as your Autodesk ID). You can access the saved drawings in AutoCAD Web and the AutoCAD mobile app with your Autodesk account on any device: laptop, tablet, or phone. This is where the collaboration workflow starts.

You may already be an active user of your A360 Drive or perhaps A360 Team on your AutoCAD projects. It is cloud-based storage in the same vein as Dropbox, Box, Google Drive, or Microsoft's

OneDrive. In fact, it is tied to your Autodesk account and can be used anytime in AutoCAD, providing you have signed in. It acts as another method of storage, which is great for larger drawings and/or projects, but more importantly, it gives you the control to provide access to your designs by letting you email an invitation to any interested parties who can then access your designs

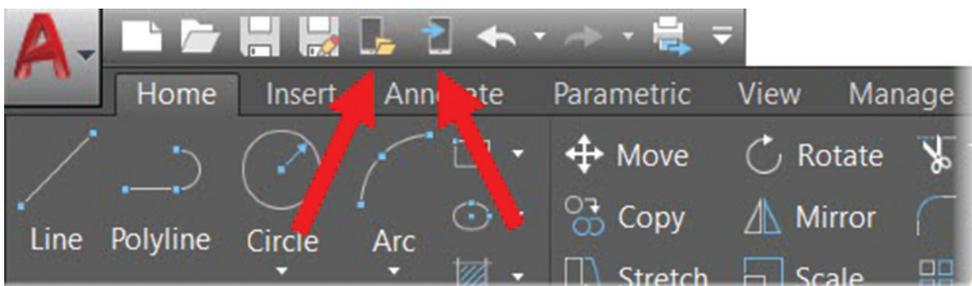


Figure 1: The new "Open from Web & Mobile" and "Save to Web & Mobile" icons in AutoCAD 2019

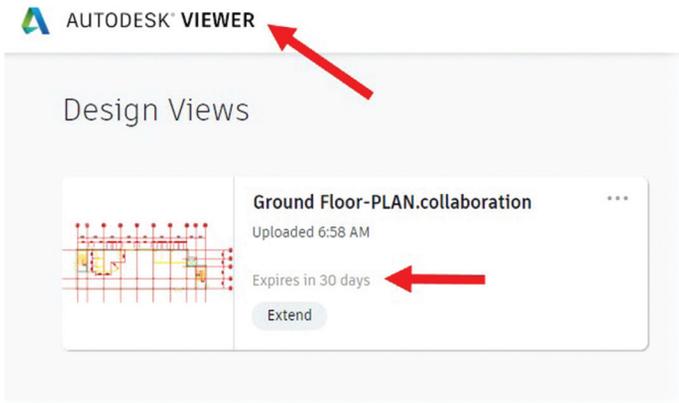


Figure 2: The Autodesk Viewer showing a shared view with the expiration period highlighted

as well. You can provide comments on those designs in a fashion similar to the old Internet Messenger. Collaboration can be controlled with private or public access to your drawings, so any drawings that might be sensitive can be seen only by designated members of the team.

If you don't want to provide access to any cloud-based data, you can also use the new Shared Views function in AutoCAD 2019. This provides a browser-based version of any view from a drawing, shared by way of a hyperlink, valid for 30 days. It can be viewed via the Autodesk Viewer, again, accessible by way of an Autodesk account.

The Autodesk Viewer provides access to any standard views and named views, layers, and properties of any view in any drawing, but does not allow editing, nor does it require any deep and meaningful AutoCAD knowledge. It is ideal for collaboration with non-CAD users who simply need to see a view of a design. Collaboration is done via the comment workflow mentioned earlier. Comments are stored with the shared view and can be accessed at any time, thus enabling easier collaboration, purely via the user's proprietary browser (Google Chrome seems to work best, just so you know). The 30-day expiry period can also be extended if the need arises.

In March 2018, there was the usual Autodesk annual version update to the 2019 range of products. With this came the new One AutoCAD subscription, which provides the original AutoCAD (2019) plus all the other flavors of AutoCAD, known as "toolsets."

One of the new additions in this subscription package is AutoCAD Web. AutoCAD Web has been built from the ground up to give the user a completely new browser-based version of AutoCAD. It replaces the older browser-based versions AutoCAD WS and AutoCAD 360, and is being developed to be updated regularly with new features and functionality. This means that collaboration is even easier. AutoCAD Web can go on the road with you. Whilst it is not the equivalent of the desktop AutoCAD, it still allows you to work on your designs and drawings in a browser and offers an "offline" mode should it be needed.

As you can see in the AutoCAD Web interface (bottom left of Figure 3), many of the familiar commands are in



Figure 3: AutoCAD Web with a drawing loaded, using the Google Chrome browser

# AutoCAD 2019

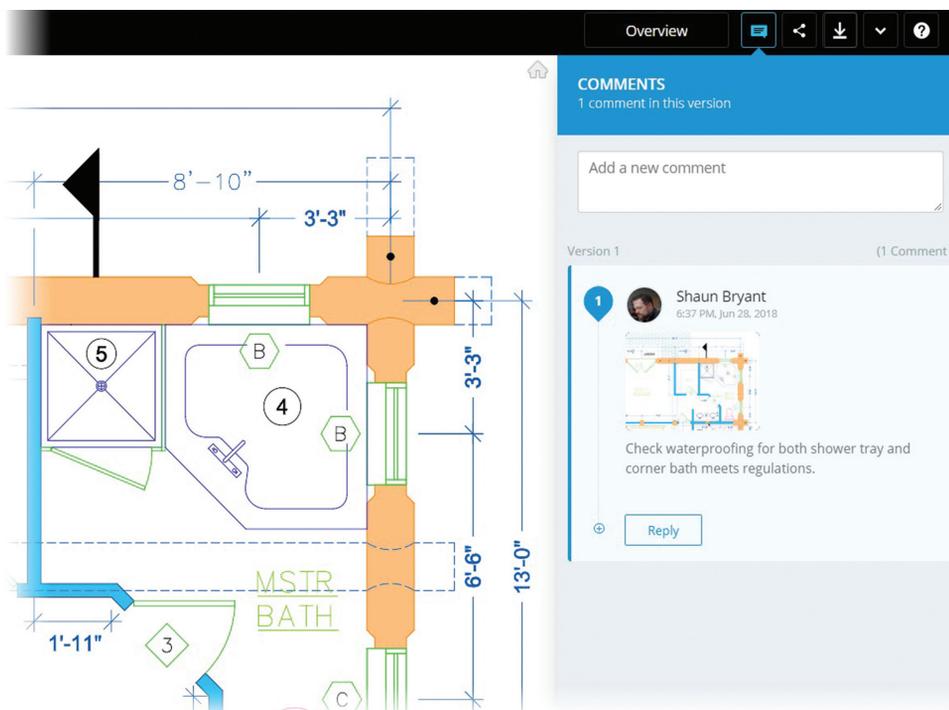


Figure 4: A zoomed view of a drawing in the Viewer in A360 Drive with comments added there, and the AutoCAD Web development team intends to add more as the product matures and becomes a more well-rounded application.

So, how does all of this assist YOU, the user, in collaborating your designs to your team and clients? Well, all the aforementioned applications give you a workflow that allows you to not only collaborate, but also to mobilize your AutoCAD desktop and take it on the road with you.

Here's a scenario for you. You're working on a building refurbishment and need to go on-site to check the existing building details. In the old days (showing my age now), you would have taken a survey pad, a pencil, and a camera. Nowadays, you can sit at your desk, log in to your A360 Drive and upload the existing building DWG files, ready to take with you. You head to site, with your tablet and perhaps your phone. There's a good mobile Internet signal on the site, so you can log in to the AutoCAD mobile app or even AutoCAD Web.

The major benefits for collaboration when using the Autodesk cloud apps are connectivity between the applications, plus the ability to link technology to your designs. The zoomed view of the drawing can be linked to comments via the viewer in A360 Drive or the Autodesk Viewer—perfect for snagging an as-built or assessing an area to be refurbished or demolished. These comments can then be shared with the project team by inviting team members to view the drawing and adding their own comments, thus progressing the design by way of collaboration in real time whilst on-site.

In Figure 4, you are checking that the refurbished bathroom meets the local authority's regulations and you can load this up on your tablet to check. Comments can then be made to the team, as you collaborate with them to get the design finalized.

Another great feature in the cloud-based applications is versioning. Your A360 Drive account will monitor changes to the stored files and let you know which version of the drawing is the most current. You will notice at the top of the comments panel in Figure 4 that there is one comment in that version of the drawing. Versioning in the cloud can then be tied in to revisions of your design when they are formally issued, either internally or externally. Plus, any comments dialog will be connected to each version of the uploaded A360 Drive files.

Figure 5 shows you a drawing open on an iPhone 8 Plus in the AutoCAD mobile app. (A Plus model of a phone gives you a lot more screen real estate in the app, by the way. Consider that on your next phone upgrade.)

You can see that comment #3 is telling me that I put a comment on the drawing via my phone to check the column set out (note

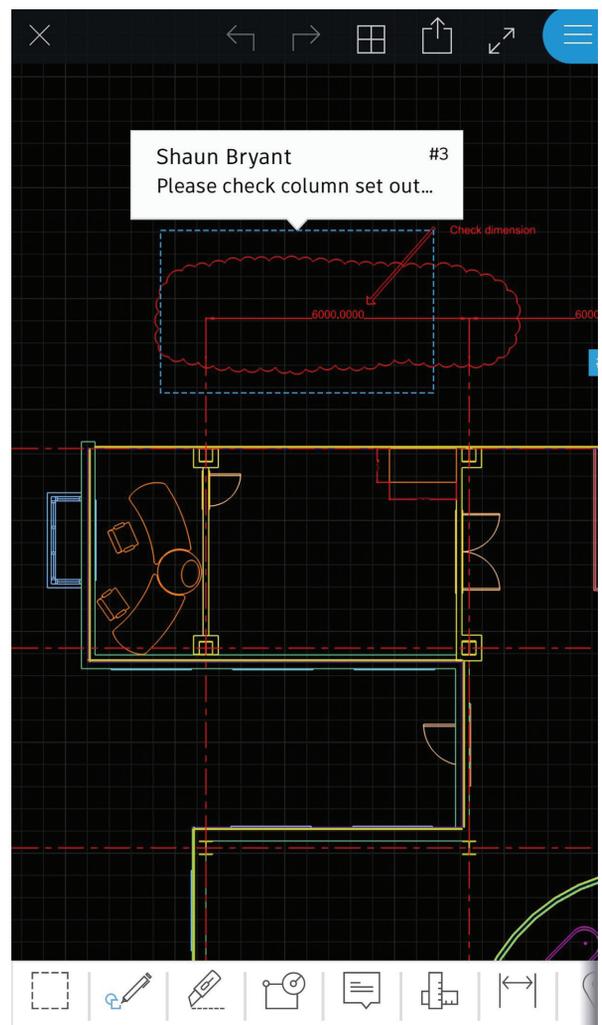


Figure 5: A typical AutoCAD drawing open in the AutoCAD mobile app with redlined revision clouds and comments

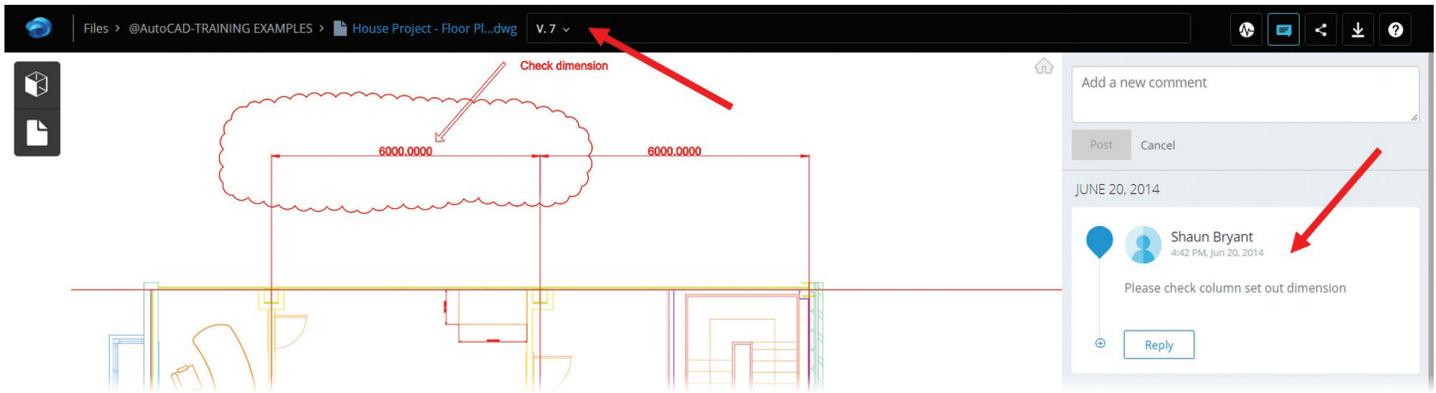


Figure 6: The same drawing open in the A360 Drive Viewer with redlined revisions and comments shown, as well as the versioning number

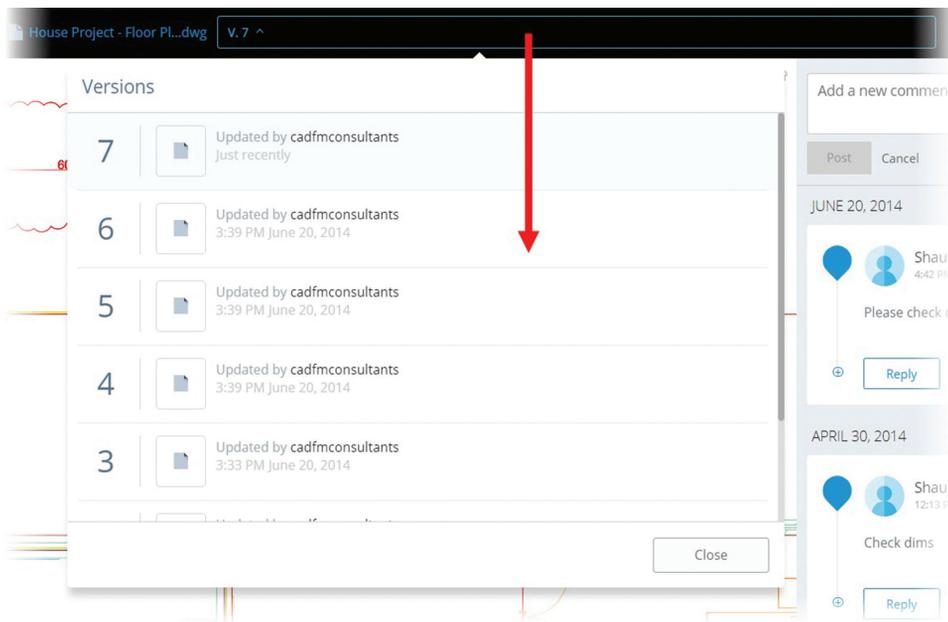


Figure 7: The versioning drop-down in A360 Drive that shows the versions of the uploaded drawing file in the cloud

my name at the top of the comment). I am putting that comment there whilst I am mobile, on-site. No paper drawings required. No holding down large sheets of paper on the hood of your car with whatever you can find on-site, right? Plus, your comments automatically sync with the cloud-based drawing after a browser refresh. THIS is the benefit of mobile collaboration. Figure 6 shows you the same redlines and comments after a browser refresh in the A360 Drive viewer.

The versioning number is always shown in the viewer (at the top of Figure 6, shown by the red arrow) along with any associated comments as described above. If you click on the drop-down arrow next to the version number, you can go back to each version of the drawing that has been saved in the cloud, thus creating an audit trail of what revisions and comments have been made. A great way to sanity check if everything has been completed by way of design editing. You can select any version in the viewer to go back and refresh your memory on what has been done at any time, in real time.

The benefits of this connectivity for mobile collaboration are huge. You're out on-site with just your phone, sending comments back to the office in real time. These comments can be acted on immediately, saving many hours of traipsing back to the office with redlined drawings that then must be drafted up. That kind of repetitive, time-intensive activity just isn't needed anymore. Plus, you have a phone. Any detailed conversations that are needed can be done over the phone to discuss the finer points in more detail. Yes, it IS still a phone you can have conversations on, right?

As I mentioned previously, there are considerable benefits to be had from mobile collaboration, and Autodesk provides all the AutoCAD collaboration tools you need.

## 1. AutoCAD (more specifically the One AutoCAD subscription)

The traditional desktop AutoCAD application, when used via the One AutoCAD subscription, gives you the latest version—AutoCAD 2019. This version of AutoCAD is fully connectable to your A360 Drive by signing in to your Autodesk Account in the application. It provides you with direct saving and opening of files to and from the cloud via the Quick Access Toolbar, thus making your drawings available for mobile collaboration.

## 2. AutoCAD Web

AutoCAD Web is available as part of the subscription. It is a completely browser-based version of AutoCAD built from the ground up. It gives users the ability to work with a cut-down version of AutoCAD with none of the installation file baggage. It is perfect for your team members who do not need to work intensively in AutoCAD but might need to add small edits and

# AutoCAD 2019

comments to project designs when on-site. Team members can also act on comments made via the AutoCAD mobile app immediately as they will show up in the latest version of a cloud-based drawing as soon as the comments are made and the drawing is refreshed.

### 3. AutoCAD mobile app

The AutoCAD mobile app quite literally takes the traditional AutoCAD desktop mobile. Drawings can be opened on a mobile device (a phone or a tablet); redline revisions and comments can be made, along with simple editing. Since the drawing is cloud-based, it is completely collaborative and can be worked on by various team members simultaneously, and as mentioned, it takes your desktop mobile, allowing you to work on the road or on-site.

### 4. A360 Drive

A360 Drive is your cloud silo for all your collaborative designs and drawings. Activated by your Autodesk Account, it can be used to not only store drawings, but also ALL your project documents—and all are viewable in the A360 Viewer. It provides folder and sub-folder functionality, plus versioning and the ability to add version-specific comments to any file stored there.

### 5. Autodesk Viewer (combined with Shared Views in AutoCAD 2019)

The AutoCAD 2019 desktop application allows you to share views from your designs via the Shared Views command on the Collaborate ribbon tab. These shared views can be opened in the Autodesk Viewer in any browser, providing you have an Autodesk Account. Each shared view has its own hyperlink that is valid for 30 days. This is a superb resource to get views from your drawings and designs out there immediately for comment to the project team. The viewer is browser-based so there is no installation needed and the interface is quick and easy to use for non-AutoCAD users, thus making collaboration via the cloud quick and easy.

Cloud-based collaboration is becoming the norm. Technology has reached a point where the cloud is easily accessible from mobile devices and the desktop, and the mobile Internet provides the conduit between the desktop, devices, and the files stored there. Autodesk has realised this and is providing and developing tools all the time to make that collaboration easier. I have just touched the surface by showing you what can be done with AutoCAD and other AutoCAD associated cloud-based applications.

There are amazing leaps forward for products that work with Building Information Modeling (BIM) and Revit®. The BIM 360 suite of products gives users cloud-based worksharing and coordination of projects, along with visualization and quality management tools, even down to safety and issue management. These tools provide an entire project-based toolbox with which Revit projects can be handled and managed effectively.

On the 3D design side of things, you even have the entry-level Tinkercad now talking to the cloud-based 3D modeling tool,



Fusion 360. Again, designs can be stored in the cloud and used for 3D printing. Models can be added to the appropriate A360 Drive silo and still be viewed and commented on.

Slowly but surely, the advance of cloud-based collaboration will continue. The benefits of this are yet to be seen in full, but they are huge. And with Autodesk software, you can use the cloud-based tools provided to make anything, to use a well-known Autodesk phrase.



*Shaun Bryant is an Autodesk Certified Instructor in both AutoCAD and Revit Architecture with sales, support, and technical expertise, CAD managerial skills, with 30 years of industry experience. Shaun has worked as a consultant, trainer, manager, and user, all of which helped him develop a diverse skillset. His career has included 18 years as a CAD, BIM, and facilities management consultant and trainer; with the earlier years of his CAD career in sales, pre-sales, and business development; and industry experience as a CAD manager/user. Shaun has been a director on the board of Autodesk User Group International (AUGI) and he is also the author of the reputable CAD blog, Not Just Cad! He is a seasoned Autodesk University (AU) speaker and was the AutoCAD expert at the inaugural Autodesk University London in June 2017. He is also an Autodesk University Speaker Mentor, AutoCAD Influencer, and a member of the Autodesk Expert Elite program. Shaun lives in Norwich in the UK and is the owner and director of CADFMconsultants Limited.*

new

# CAD find replace

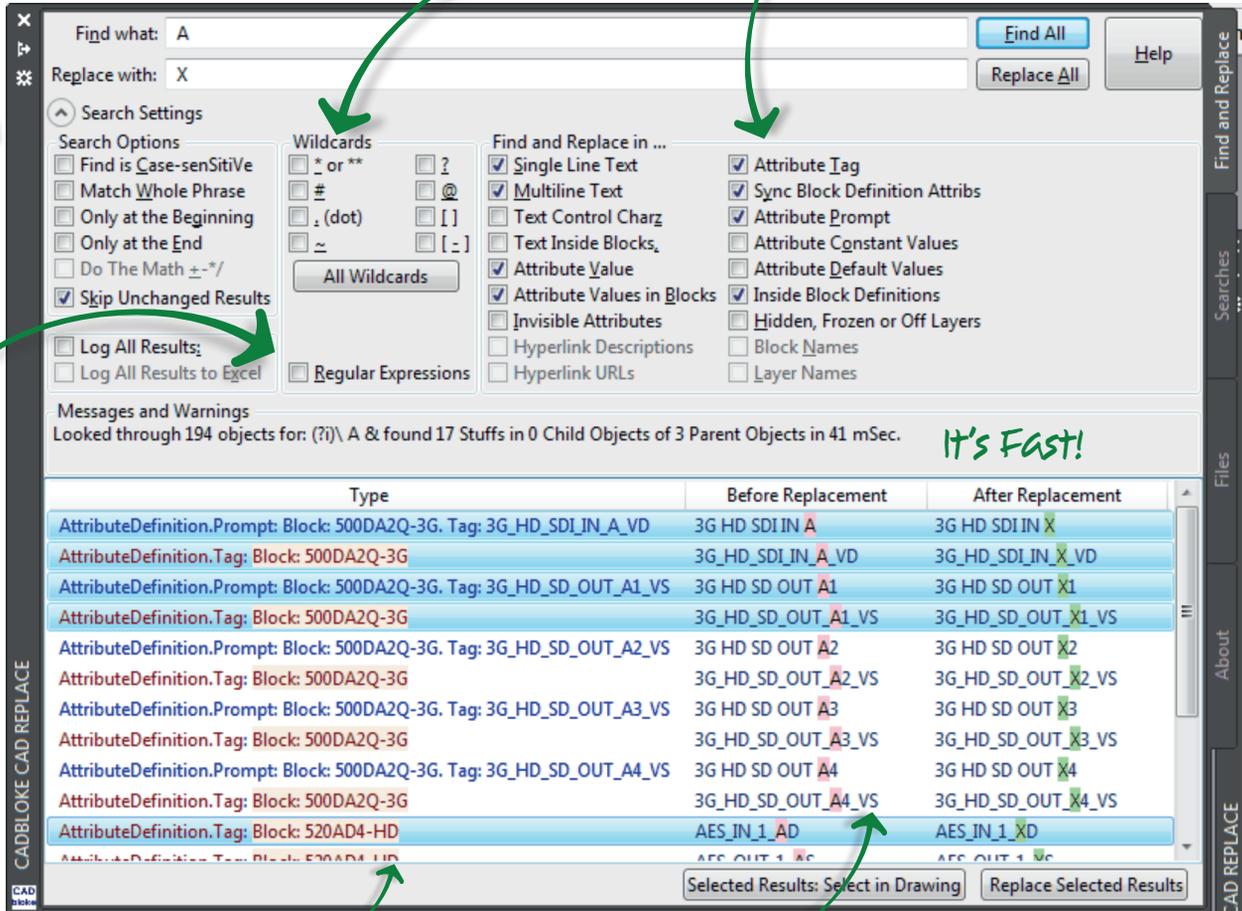
## See Exactly what You Found and Replaced

Tool Palette. Not a Window.  
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inside Blocks with auto ATTSYNC

Regular Expressions (Wildcards on steroids)



Help & Support

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IT'S FAST!

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Replace only what you want

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Use any combination of wildcards and settings you like or if you're feeling brave, Regular Expressions!

Save your searches, load, edit, or combine them into lists in the "Searches" tab.

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Made by Ewen@CADreplace.com



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# Standards: Keys to Collaboration



**L**ast month I mentioned World Standards Day, celebrated in most countries on October 14, 2018. There is still time to make plans for your Standards Party. Let's see... chips, dip, process statement... appetizer, drinks, procedure review... this sounds like so much fun. Gather all your buddies and let's celebrate.

Standards are key in your efforts to increase collaboration. Whether it is in your office, or between contractors or client. We all need to get along. One way to do that is with standards. But standards need to be understood and not just dictated.

## IT'S OUR POLICY...

I had a brief conversation with one of my team members who helps support end users. He was trying to get someone to understand why we did something is a certain way. He wanted to just tell the person "It's our policy." I told him to hit pause and discussed it with him prior to his marching off and expecting positive results from his proposed conversation. He was "telling" and not "selling." He was passing on the "what" but not the "why."

## NEVER STOP AT A STATEMENT

I think you should never make a policy, procedure, or standards statement and then stop talking—especially if the statement is

just left hanging in the air like a dark cloud waiting to rain down on the hearer. So, I usually lead with a statement, followed by an explanation. Policies are great and you should have them. Just don't take a stance, like a menacing parent, making statements like "Because I said so." It will not be received well.

When confronted with someone who does not want to "color within the lines," you may need to go deeper. That is when I suggest talking about why you need the common guidelines in place. Standards, just for the sake of making people comply, has never been my focus. I tell people if they can get the project done quicker and more stable without policies or guidelines or standards, then I will throw these out. The people appear to be happy, and then they realize that they need to share work with others.

They need to collaborate. They, along with those they will work with, need to agree on some ground rules and assumptions. When they open someone else's files to find a jumbled mess of layers, blocks, and who knows what, they soon understand why the standards need to be in place. When working with teams, common ground is crucial—and policies, procedures, and standards lead the way.

## LEAD WITH "WHY"

Take the time to discuss the "why" of the policy or standard. You should know why things are structured as they are if your guidelines are good ones. The standard should be written down and you may want to keep a record of the reasons "why are we doing this?" as you create the standards. It is not part of the printed standard, but can be used in training and explaining to others the rationale for doing things in a specific manner.

You should be able to defend why you are doing things in a specific way. It might be that you have to comply with a client's standard. You may have found that doing it another way causes more problems. You may have times when collaborating between disciplines on design means that one group may need to give a little so others do not have to do more work. Your overall goal is to make the entire project team work better and faster, not just one department. If one discipline saves an hour on a file, but another has to work three hours longer because of the file structure, then you have lost two hours. If the first discipline adds 30 minutes to their work and it saves an hour in another, then you have reduced the total work effort. So some might have to work a little more to save others time in the file.

## RETHINKING THE STANDARD

When people start asking again and again about the why, it may be time to rethink a specific guideline, or even the entire standard. It is good to review your standards when you get a string of frustrated looks from the teams that have to follow the processes in place.

Does the standard still fulfill its purpose? This will most likely not end in throwing out the entire book, but it might mean a review of pain points to see what might be done to streamline the annoyances that seem to provide few benefits.

Is it too cumbersome? Are you trying to force users to do things in a way that was abandoned by the software three releases back? Are there better ways of getting things done now? Can you move the old methods out?

Does it provide benefit to anyone? In my past there have been times when we discovered we were straining to fulfill the standard, but not getting the expected benefits from it. Sure, it may shave off a few minutes for one group, but the others were forced into doing something that did not balance out when comparing time saved to time spent overall.

Is it not needed? Has a client standard been followed even when the client no longer needs it? Check to make sure that you are working with the latest version of client standards and requirements.

Does anyone even follow it? This is a tough one. Sometimes users just do not follow the standard. You are probably not shocked by this because it happens all the time. They did not know, did not care, and did not even think about the standard. But sometimes it is because they know it is not needed and causes frustration with little profit. They have, in practical terms, changed the standard for you. You need to find out where that is happening and either get them back on track, or jettison the outdated and unneeded guideline they have been avoiding. I have done this in the past.

Has someone come up with a better way? This is the best reason for modifying the standard—there is a better way now. You or others have found an improved method to create items or a new better location/layer/level for the entities everyone is using. People may have even started using this new way and the standard has been changed for practical purposes. Time to update documentation to match.

Keep an eye on the standard for small changes you can make to improve collaboration. Keep it locked in enough to unify production, but fluid enough to make improvements that might be needed. It is the roadmap that we all must develop together so we can keep our eye on the real target, which is productivity through unity by following a standard that allows all of us to collaborate.



*Mark Kiker has more than 25 years of hands-on experience with technology. He is fully versed in every area of management from deployment planning, installation, and configuration to training and strategic planning. As an internationally known speaker and writer, he is a returning speaker at Autodesk University since 1996. Mark is currently serving as Director of IT for SIATech, a non-profit public charter high school focused on dropout recovery. He maintains two blog sites, [www.caddmanager.com](http://www.caddmanager.com) and [www.bimmanager.com](http://www.bimmanager.com).*

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## WALK-THROUGH-3D FOR AUTODESK REVIT



<http://amcbridge.com>

Walk-Through-3D™ for Autodesk Revit® 4.0 is a proof of concept add-in to connect Revit and Unity gaming development platform.

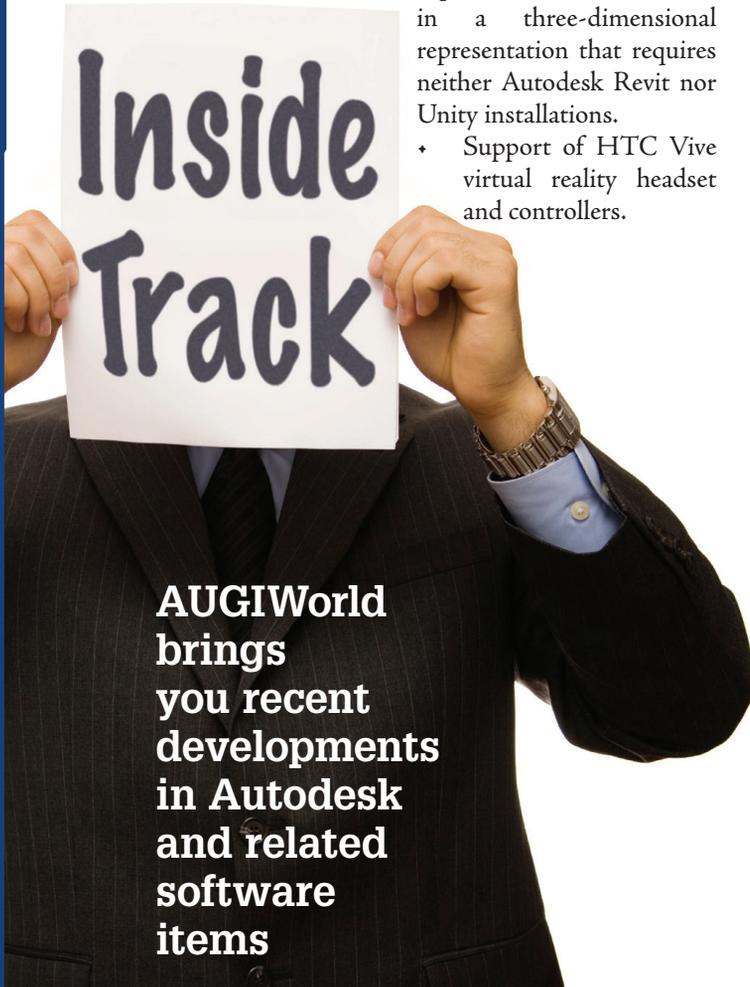
The add-in supports export of 3D model geometry from Revit to Unity, allowing users to have the first-person 3D shooter game-like experience while using a Revit created model as the 3D environment.

The main features of the add-in include:

- Export of 3D model geometry with materials and textures from Revit to Walk-Through-3D.
- Manipulation of the resulting 3D model in a similar fashion to a 3D first-person shooter game.
- Support of textures along with an ability to apply weather effects.
- Generation of a standalone executable package to view the

exported Revit model in a three-dimensional representation that requires neither Autodesk Revit nor Unity installations.

- Support of HTC Vive virtual reality headset and controllers.



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Download Unity 2017.1.1 or newer to use the data export feature. Walk-Through-3D is compatible with Revit 2017-2019.

## TRANSFER SINGLE



<https://bit.ly/2zArnvL>

Tired of all or nothing regular transfer standards? With Transfer Single you will be able to transfer just one item of most of the standards or multiple standards at one time. You will also be able to copy additional elements such as views, printing setups, section boxes, worksets... even legends with contents.

The app features:

- More Standards to choose from: Line Patterns, Fill Patterns, Dimension Type, Parameters, Rooms, Spaces...
- Ability to transfer sheets (but without views)
- Ability to transfer annotation elements in views (in any sheets, floor plans, and more)
- Different behavior when selecting/clicking. Use control, shift, and marquee when selecting multiple standards.

This plug-in is free of charge with no hidden costs.

## ID SPEC



<http://www.schneider-electric.com/ww/en/>

ID Spec plug-in allows you to do the predesign of an electrical system inside AutoCAD®.

Using ID Spec, you can create an electrical power plan with the architectural layout of the building in the background, taking into account various electrical loads in the building and their connection details with automatic determination of cable length.

ID Spec proposes feasible solutions for the electrical power plan by analyzing load distribution, sizing, and selection of electrical equipment. You can now optimize your electrical distribution design inside the building by barycenter calculation and evaluate the overall energy performance of the electrical system.

ID Spec plug-in generates a high-level bill of equipment and a detailed technical specification of the electrical equipment to allow customers to have their proposals ready in no time.

Note: This app uses custom installer and not the Autodesk App Store standard installer.

If you have some news to share with us for future issues, please let us know. Likewise, if you are a user of a featured product or news item and would like to write a review, we want to know: [brian.andresen@augi.com](mailto:brian.andresen@augi.com)

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# Collaboration: The New BIM 360 Design

 Some of you may have heard that Autodesk® Collaboration for Revit® (C4R) has been discontinued. This is NOT a rumor. It has changed to the new BIM 360® Design. BIM 360 covers all aspects of a construction project, enabling project managers, subcontractors, designers, architects, and other construction management professionals to have total control over the processes and phases of their project.

BIM 360 Design is a cloud-based worksharing environment that runs on the Autodesk Forge platform. This is basically a “rebranding” of C4R, with many more features. Setting up BIM 360 Design is a bit different. Collaboration for Revit needed BIM 360 Team. With BIM 360 Design, you need BIM 360 Docs.

This article will explain what you get with BIM 360 Design, basic functionality, and hopefully answer questions you may have.

## WHAT'S UNDER THE HOOD?

BIM 360 Design is one platform hosting multiple applications. Within this new platform, you will get design, pre-construction, field execution, and handovers and operations. Autodesk states, “With BIM 360 Design you can co-author multi-discipline Revit models, access data management, collaboration functionality like 2D & 3D viewers, and a markup tool accessible via web, phone, and tablet.”

New features included in BIM 360 Design that C4R did not have include access controls by user, role, or company, and file- and folder-based permissions, issue management,

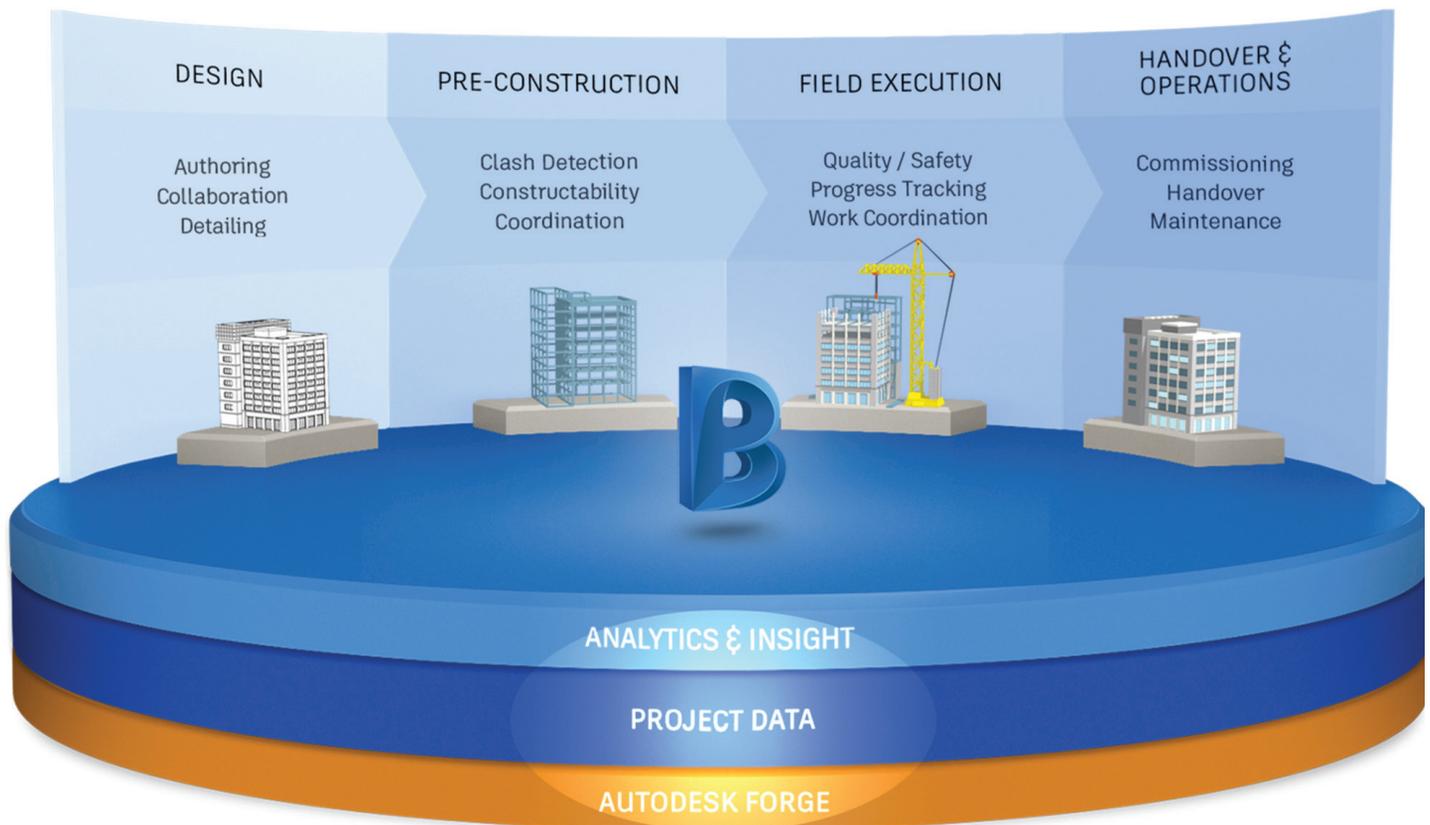


Figure 1

tracking and deliverable coordination, change visualization, and unlimited storage.

If you are using Collaboration for Revit to co-author multi-discipline Revit models, and are storing your project data in BIM 360 Team, you may continue to use both for ongoing projects with uninterrupted access for as long as you renew. However, BIM 360 Team does not connect to the new BIM 360 platform. For the full experience, start your new projects in BIM 360 Design, along with Revit 2018.3 and later versions.

## KEY CAPABILITIES

With a single library to upload all models, aggregate model viewing, version history, and automatic clash detection, users can design, build, and operate in this single, unified environment.

Collaboration, integration, and profitability can help with business values from within this environment. Design intent with transparency will help to mitigate issues downstream. AEC data that once needed all individually installed platforms can now be opened in one location.

Following is a list of some key capabilities and what they can do.

### Quality Control Programs

- Create and assign issues
- Track work with checklists
- Communicate project status

### Jobsite Safety Management

- Inspection templates
- Pre-configured checklists
- Safety metrics reporting

### Commissioning & Handover

- Track equipment and assets
- Update asset information on iPad
- Attach documentation to equipment

### Daily Reporting

- Dashboards and custom reports
- Export data to Excel for analysis
- View cross-project trends

### Collaboration

- Access to project data online or offline
- Schedule work for team members
- Automate report distribution

### Access & Permissions

- Permissions by user, role, or company
- Control subcontractor access

Not only can you do the aforementioned, you also have the capability to connect your own applications through the open API on the Forge platform.

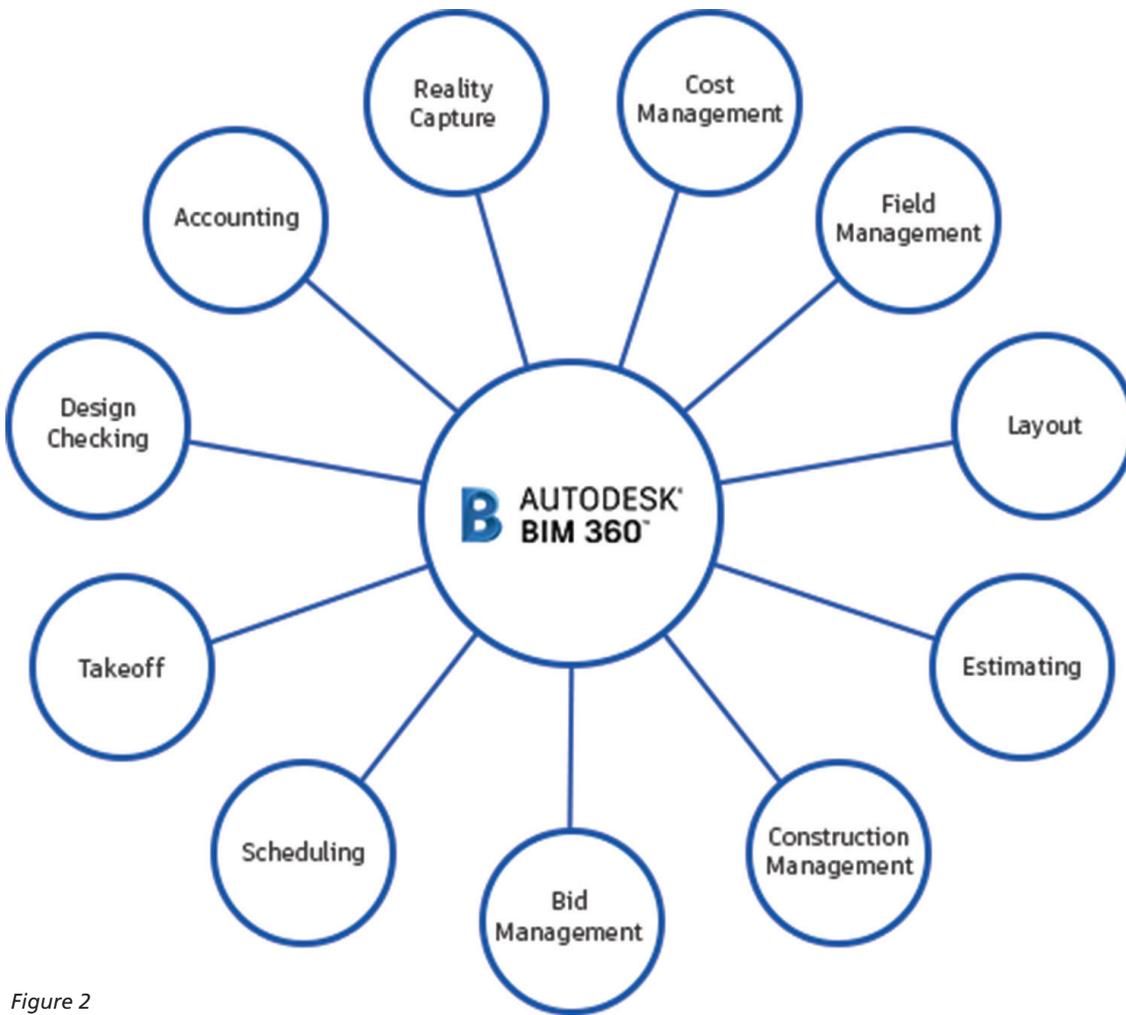


Figure 2

**Q & A**

Below is a list of questions and answers documented by Autodesk.

**What is happening to my Autodesk® Collaboration for Revit® subscription?**

As of April 9, 2018, Collaboration for Revit will be repackaged and rebranded as BIM 360® Design. As a current subscriber, you can continue to use your Collaboration for Revit and BIM 360 Team subscription—and enjoy uninterrupted access to your services and projects—for as long as you renew.

**How do I activate access to the new BIM 360 platform?**

You should now see that Collaboration for Revit is rebranded in your Autodesk Account. You will have uninterrupted access to Collaboration for Revit and BIM 360 Team on your projects.

**I have multiple contracts of Collaboration for Revit / BIM 360 Design. Should I activate access for all contracts?**

No, you only need to activate access once for your account. Users from different existing contracts or new purchases can be added to the same BIM 360 account from within the product without the need to activate again. However, every BIM 360 Design user needs to provided entitlement access within Autodesk Accounts to have access to Revit Cloud Worksharing.

**My data is stored in BIM 360 Team. Is my data being migrated, or do I have to migrate my projects?**

You can continue to use BIM 360 Team as you do today, retaining access to your projects and data. Data in BIM 360 Team will remain separate from the new BIM 360 platform. Projects and data created in one will not be visible in the other. Autodesk does not plan on migrating any data at this time.

**I have a monthly, annual, 2-year subscription. How is my subscription affected?**

Regardless of how you purchased Collaboration for Revit, you can continue to renew and use as you currently do for as long as you have a valid contract. This also applies to customers who have subscribed via user packs.

**I have a token flex agreement for my**

**company. How is my subscription affected?**

Regardless of how you purchased Collaboration for Revit, you can continue to use as you currently do for as long as you have a valid contract.

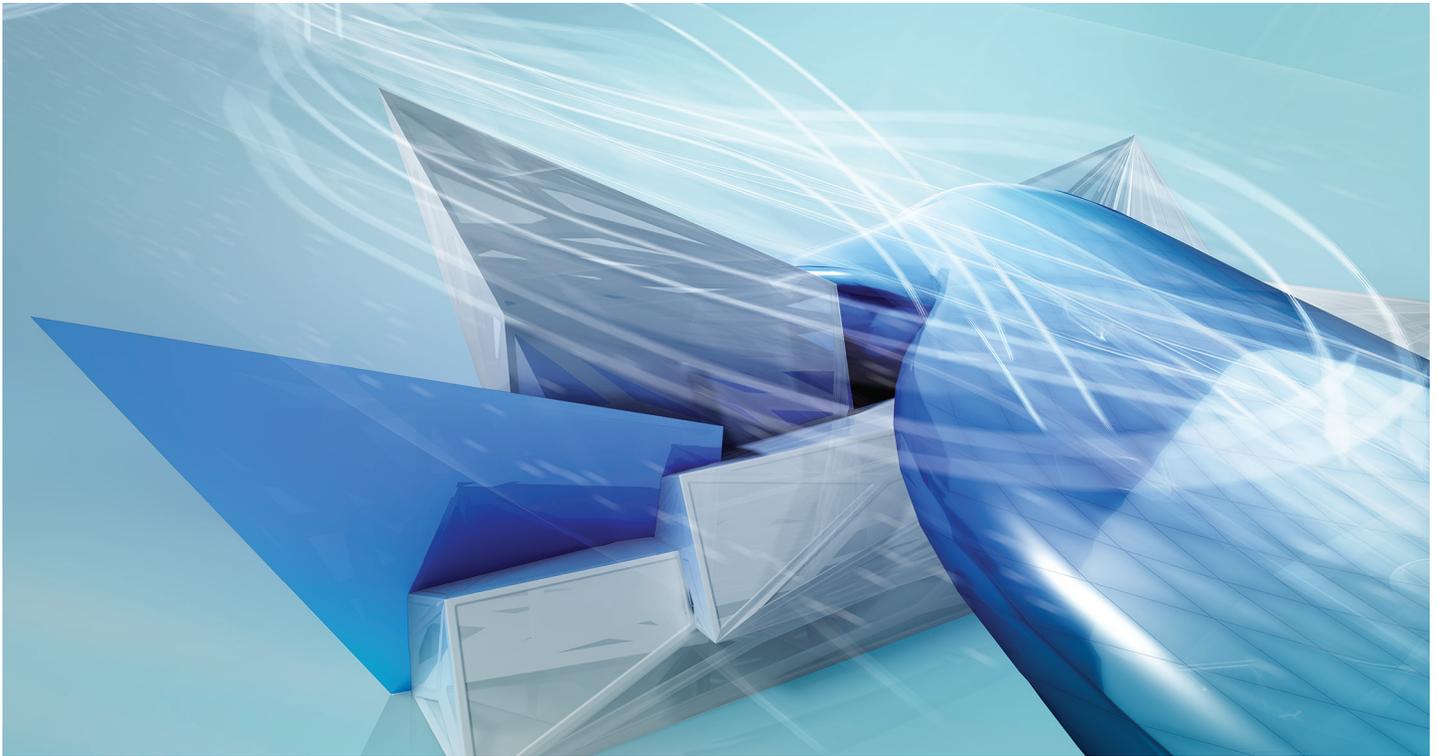
**Can I add more members to an existing project in BIM 360 Team?**

As a Collaboration for Revit customer, if you wish to add users to your subscription, you can purchase BIM 360 Design subscription packs or individual subscriptions. Each new subscription will give you an additional Collaboration for Revit and BIM 360 Team entitlement.

**Which Revit versions can I use with BIM 360 Design?**

BIM 360 Design can be used with Revit 2018.3 and later versions.

- With Revit 2015 to Revit 2018.2, you can continue to use cloud worksharing with BIM 360 Team (as you have been doing in Collaboration for Revit). To set up a new BIM 360 Team hub or assign your new contract to an existing Team hub, go to the contract assignment page.
- With Revit 2018.3, you can use cloud worksharing with BIM 360 Team (as you have been doing in Collaboration for Revit),



while also having the option of cloud worksharing with next-generation BIM 360 (using the Document Management and Design Collaboration modules).

- Note: projects and data in BIM 360 Team will remain separate from the new BIM 360 platform. Projects and data created in one will not be visible in the other.
- With Revit 2019, you can use cloud worksharing only with next-generation BIM 360 (using the Document Management and Design Collaboration modules).

#### Can I use the Communicator with BIM 360 Design and Docs?

The Communicator chat tool is not supported with Revit Cloud Worksharing on the next generation BIM 360 platform. As part of your BIM 360 Design subscription, you may continue to use Communicator with Revit 2018.3 and earlier releases in conjunction with BIM 360 Team. Autodesk understands that Communicator addressed certain needs when working in a cloud worksharred project, such as sync-with-central status, and they are looking at ways in which they may satisfy these workflow needs in the future.

#### Is there a price change for BIM 360 Design?

To reflect additional features and functionality, the SRP for BIM 360 Design is now USD \$900/user/year. For exact pricing details, contact your local sales representative or reseller partner.

#### Will I see an entitlement to BIM 360 Docs in my Autodesk Account?

No, your current subscription to BIM 360 Design now comes with access to Document Management functionality on the new BIM 360 Platform. This is similar functionality that comes with BIM 360 Docs, but you will not see BIM 360 Docs in your Autodesk Account.

## CONCLUSION

The world we live in today is connected through numerous devices and platforms. BIM 360 Design makes it easier to deliver an AEC project by connecting design and construction across the project lifecycle.



*Todd Rogers is a certified Partner Service Expert (P.S.E.) and certified Autodesk instructor with over 23 years of experience in teaching, managing, and providing hardware and software solutions for hundreds of engineering firms throughout the greater Houston, Texas area. Mr. Rogers is a valued member of Walter P Moore, where he works as a BIM Manager. He also holds the "Autodesk Expert Elite" status—a program to recognize individual community members who have made extraordinary contributions with helping customers by sharing knowledge, providing community leadership, and exemplifying an engaging style of collaboration that drives a healthy and valuable Autodesk customer community. He is an active blogger. Through his personal blog website ([civil3dj.wordpress.com](http://civil3dj.wordpress.com)), he shares tips and solutions on Autodesk software issues.*

# Online Collaboration for 3ds Max Users

"ALONE WE CAN DO SO LITTLE; TOGETHER WE CAN DO SO MUCH"  
- HELEN KELLER

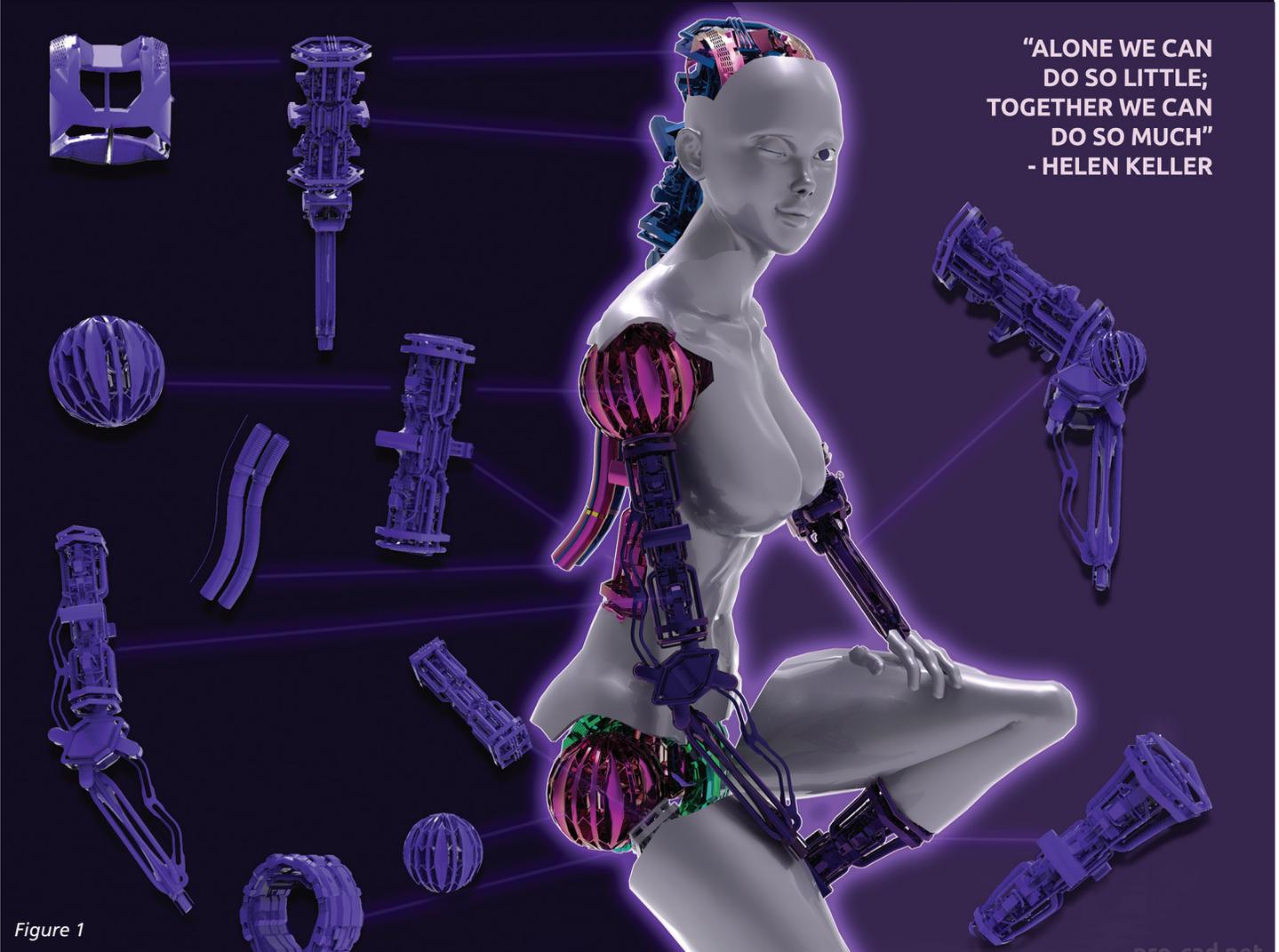


Figure 1

**B**ecause there is no license or insurance required in our field, there are no geographical bounds to 3ds Max® users or our clientele. Collaboration often occurs with participants regions apart. To get to where we are today took an enormous amount of resources, money, and people who poured their hearts and souls into updating the entire Internet, the browsers, the computers, processors, and graphics cards to help us collaborate with one another as best we can. The results of their labor lead to some cool websites, such as those presented here, that allow us to collaborate with clients and colleagues anywhere in the world.

**P3D.IN**

P3D.IN was built with collaboration as a priority. Specifically, the focus of P3D.in was to make sharing 3D content fun, while offering simple tools to communicate and ensure ways to protect data. Their site runs on all modern web browsers, tablets, and phones and offers a wide range of tools for us to customize the presentation of our content. Through their advanced features, we can control our viewer’s experience by modifying how they interact with the project we present (such as disable panning or picking background colors). We also can take advantage of their high-resolution lossless image options, ShadeSpheres, and customizable backgrounds. They also share lots of tips and tutorials.

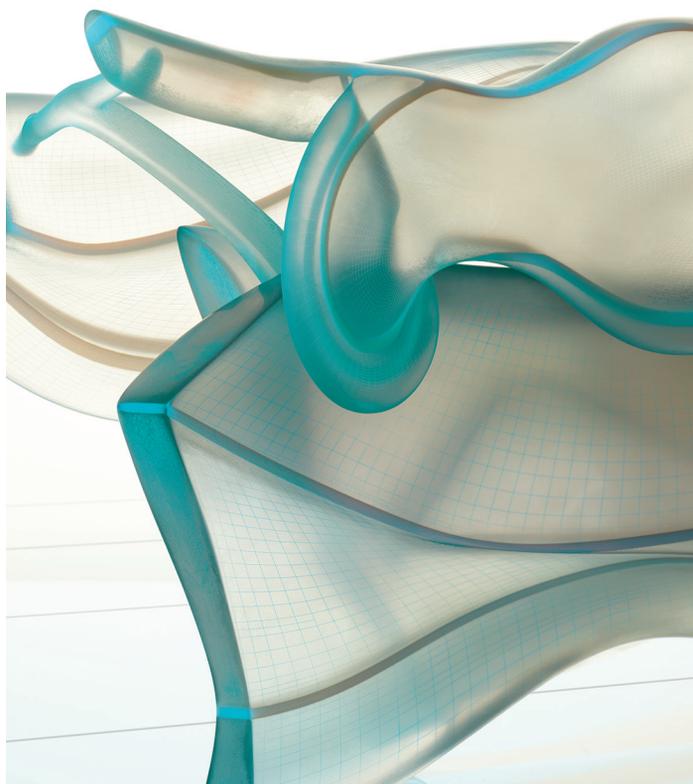


Figure 2: P3D.IN

# 3ds Max 2019

## SKETCHFAB

Sketchfab also provides many options for uploading and customization and has more than a million creators contributing to their site. It is considered one of the largest platforms for sharing 3d content online. Arguably, their most popular feature might

be that their upload system supports many of the most popular 3D formats available today. Additionally, through Sketchfab's universal 3D & VR player, we can embed our creations on our websites. Last, it doesn't hurt they have an enormous store of very cool 3D content available and tutorials for everything from 3D scanning to textures.



Figure 3: Sketchfab

## MOMENTO

Momento quickly became my favorite site for sharing 360-degree views from 3ds Max simply because of its simplicity. Similar to YouTube, we have the option to link to our image on their site or embed it on a page of our own for our viewers to review. Our viewers can pan like we do in Google street images and have the option to enter VR mode for those with the equipment. The site is straightforward to use and particularly powerful for 360-degree architectural and land development visualization.



Figure 4: Momento

## PINSHAPE

Pinshape caters to 3D printing and product development. By providing a rating and comment section, people share ideas to improve development and requests for brand new inventions. With an active and excited community, the site offers tutorials, forums, blogs, design tips, contests, learning resources, and even an ambassador program to help expand the printing market. It also provides the opportunity for people to sell their products. One piece of advice: lock up your wallet before visiting if you are a compulsive buyer.

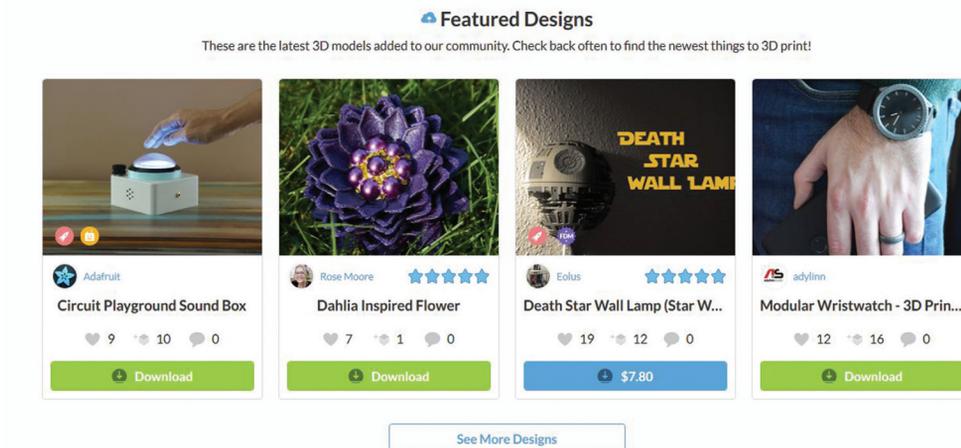
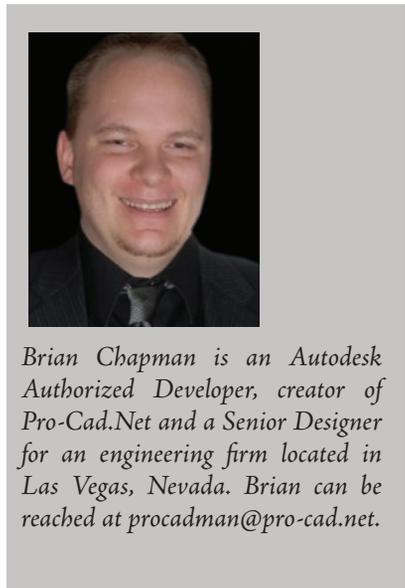


Figure 5: Pinshape



Brian Chapman is an Autodesk Authorized Developer, creator of Pro-Cad.Net and a Senior Designer for an engineering firm located in Las Vegas, Nevada. Brian can be reached at [procadman@pro-cad.net](mailto:procadman@pro-cad.net).

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# Revit Retriever: Doggone Good BIM



As we progress from lonely BIM to a more mature version, model and code checking is becoming more of an issue in the industry. Until a few years ago, the only solution to perform this kind of activity was a beautiful but rather expensive software with a name that sounds a little like a bird and starts with “S”. Don’t get us wrong—we love that software. Still, it’s good to have different options and nowadays you can even rig your own bike with Dynamo.



Figure 1

One solution we recently tried and would like to talk about is Retriever.

Being dog lovers, we can’t help but appreciate the logo. Anyway, if you go on their website you can ask to join the early access program. Even if you’re a cat lover. I think.

When you do, one of the amazing guys over there will share with you a Google Drive folder with a bunch of stuff and his Google Calendar to schedule a follow-up meeting. We’re in the new millennium, folks. This is how it’s being done.



Figure 2

The Retriever is a plug-in for Revit 2018 and, although Windows will try to make you not install it, it positions itself as a separate “Join” tab in Revit.



Figure 3

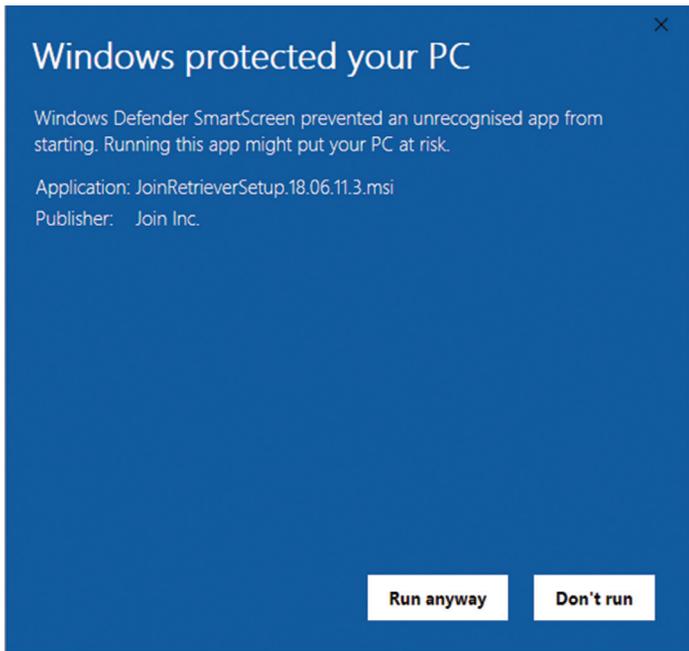


Figure 4

Just click on “More Info”: nobody asked you to protect our PCs, Windows.

When you launch Revit, it will whine that it has unauthorized content, but just hit load. Another thing you need to do is sign up with an account, if you haven't already. It's simple. You just need to remember your own name. You can make it.

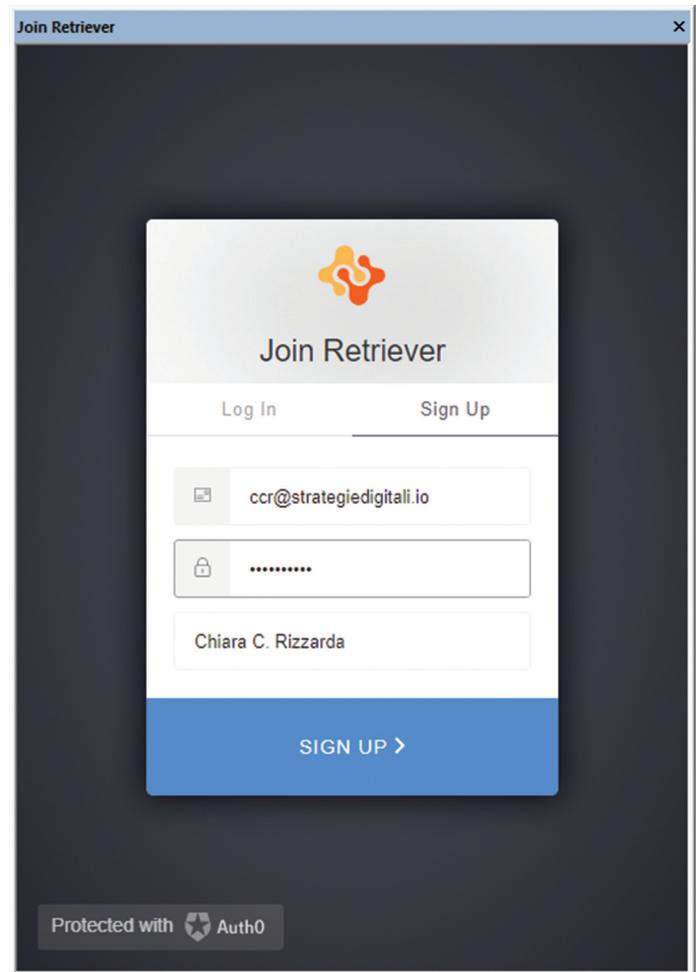


Figure 5

And now you know my personal email, too...

All done? Okay, let's rock it.

### 1. What's a model checker (and what do we mean by “rules”)?

There's no such thing as a “good” or a “bad” model. Well, okay, maybe there are models that are objectively bad, but usually the point is if a model is compliant to a set of standards and follows agreed best practice, it's good. A bad model for us would be a model using groups for residential units. Someone else might disagree. What to do, then? As usual, you need to establish a set of objective and measurable rules.

Model Checking is not an expression born in BIM: it is a concept of Computer Science and it's performed throughout all industries.

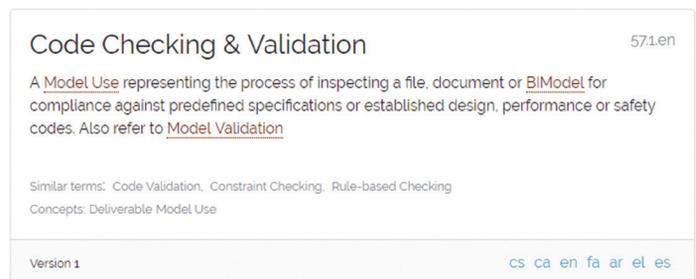


Figure 6

# Revit 2019 – Architecture

You have two levels of checking and validation: one refers to the simple checking of the model with information modelling specifications. In other words, it is checking if a parameter is there and has a value in it. The other level refers to checking the project, through the model, against rules and regulations. The BIM Dictionary considers it a model use. In other words, it's checking if the value of such parameter is "right." You can't have the second without the first.

Rules are what we tell the computer to check and you might have different sets of them. Does a parameter exist? Does the parameter have a value in it? Two very different rules already.

## 2. Setting up Rules in Retriever

When you start with a fresh canvas you'll find your Retriever wondering what you want to retrieve. What it wants here is for you to create a physical folder on your computer. Just do it. We'll see in a minute what goes inside there.

As soon as you're done, you can click on it and it offers you the different kind of rules we mentioned before.

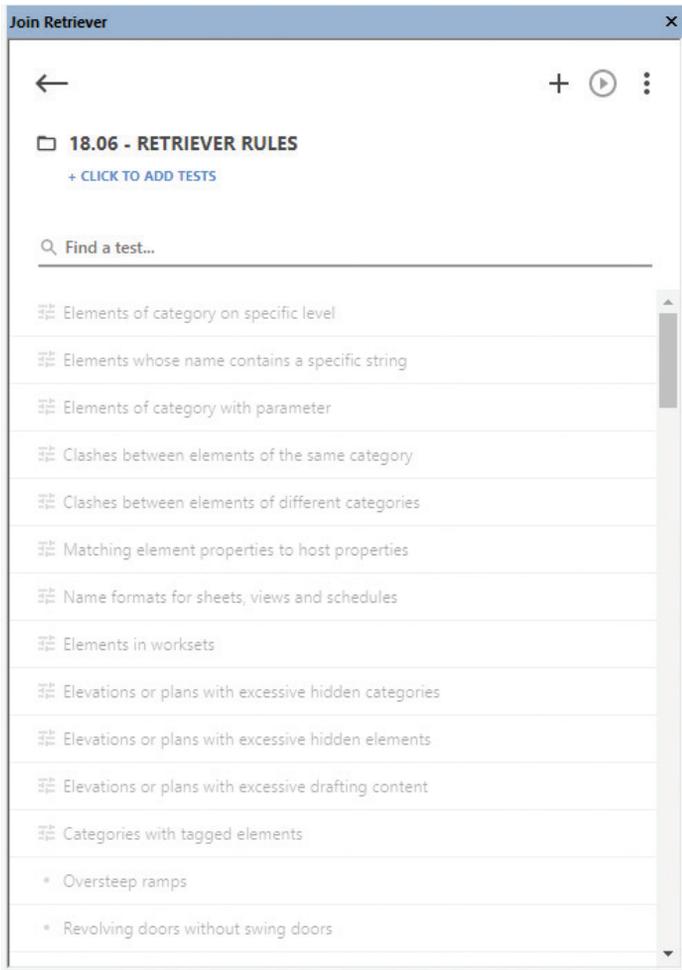


Figure 7

You have to love the "Elevations or Plans with excessive drafting elements," so let's try that one. The neat little thing will ask you which kind of views you want to check and a threshold for how many lines and hatches you think it's reasonable to have in a view.



Figure 8

Retriever is completely Open Source, so if you hit "Show Source" it will show you exactly what it's doing. If you hit "Run," it takes its time to check the model and gives you back the results.

For instance, if I pick to check how many roofs I have on a level called "Roof Level," this is what I get.

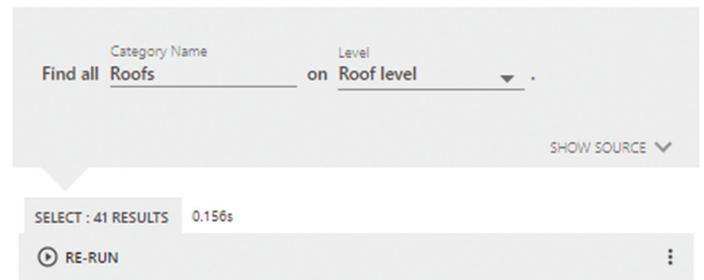


Figure 9

I can keep on going and create a set of rules to check roofs for each level. It will look like this:

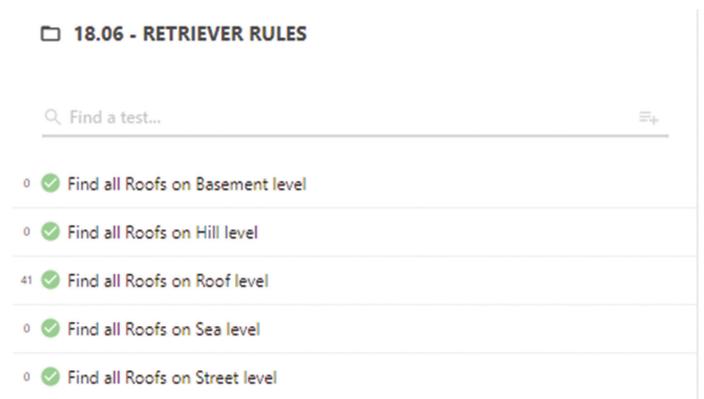


Figure 10

### 3. Categories of Rules

Rules in Retriever are grouped in seven thematic categories, as follows.

- Start from Template, including things such as naming convention for elements, views and sheets, your basic clash detection, worksets compliance, elevations or plans with excessive use of drafting and hidden elements, untagged categories.
- Code Compliance, including checks for ramps that are too steep, daylighting, door fire-ratings and so on.
- Constructability, with an advanced set of rules for clash detection and some MEP checks like unconnected pipes.
- Documentation, with rules concerning dimension rounding, phase filters, texts not in English (love this one), non-imperial units (love this one a little less) and lots of other little gems.
- Model Health, with rules for file sizes, in-place and non-used families, furniture outside of groups (guys, guys, they're supposed to be that way!), upper or title cases for naming, volumes and warnings.
- Selection Inspector, with the ability to select elements by category, by class, by group, and by host (trust us, you'll love this one).
- Updating Model, providing specific workflows. For example, to inspect manufacturer and model for curtain walls, update fire doors referring to a single room, and update by view your view templates.

And if you're out of ideas, you can check out the rules made and shared by the Community on GitHub.

### 4. Use in combination with other tools

As it always happens in our jobs these days, efficiency is found when you can make different tools work together for your own workflows and purposes. This tool is so flexible and powerful that you might find yourself in need of it even if your regular tools are elsewhere.

For instance, the Selection Inspector is very useful if, for your own coding, you need to know how Revit is calling a specific element.

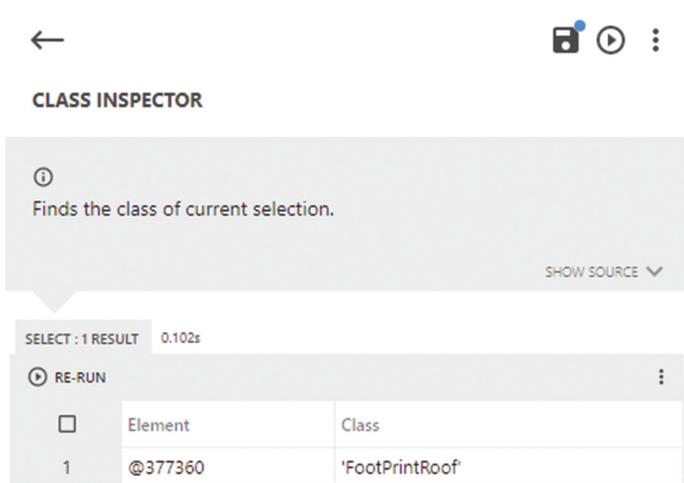


Figure 11

Oh, who knew Revit was calling it this way?

The tools about documentation are wonderful in the early stages of an implementation if you need to know if someone on your team is cheating or drafting like a cadder. You can also check for other messed up things, like overridden dimensions and such.

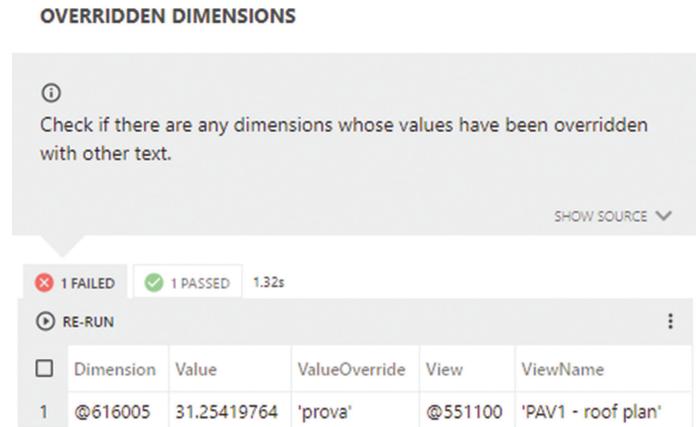


Figure 12

If you need to make analytics of your data, the best way you have right now is hitting the three dots at the right of the “re-run” bar and either save it to csv or copy to clipboard. We suggest you save them to csv.

If you manage to save them with a naming convention that makes sense, you can automate your model manager dashboard. And your BIM Coordinator, trust us, will be happy.



Claudio Vittori Antisari and Chiara C. Rizzarda are the founders of Strategie Digitali, a Computational BIM & Project Management consulting firm based in Milan, Italy. They founded the company after spending more than four years working together as BIM management of the leading architectural firm in Italy. It represents the merging of their two different working experiences, both based on the aim to use digital tools to improve Architectural Design efficiency, and more in general for the whole building cycle. These days, they spend their time consulting for private and companies in augmenting their performances and workflow efficiencies; teaching in both private and university masters around Italy; working on national and international norms; and speaking at international conferences—upcoming dates are BILT North America in Saint-Louis (August, 9-11), the San Francisco Dynamo User Group (August 15th) and the Los Angeles Revit User Group (August 16th).

# Meeting Etiquette



**A**s project managers, we will do a couple things often—attend and host meetings. In the early days of any project, there will be lots of opportunities to get together with various individuals or groups to discuss scope, schedule, funding, and so on. Focusing on the building world, these meetings could be the early stages of vetting the need for a new building or a renovation of an existing one. In the last article the concept of project phases or process groups was discussed. Continuing with that theme, let’s look at all the meetings we could be involved in.

During the initiating phase of a project the meetings can include the project sponsor, the project developer, members of the finance group or a specific management team. These meetings will be used to discuss the business needs and available funding so we can fine-tune our scope and schedule as we prepare to move into the planning phase.

In the planning phase, we will meet with internal and external project stakeholders who could include architects, engineers, designers, and contractors. In this phase we could be involved in months of design and status update meetings where we take the project requirements and come up with a set of plans to build or renovate whatever the project sponsor requested.

Once our plans are complete we are ready to move into the executing phase and bring the plans to life. During this phase, we will have kick-off meetings, pre-construction meetings, vendor pricing and approval meetings, safety meetings, and, of course, regular status update meetings.

The monitoring and controlling phase covers all the other phases, so the status update meetings will cover a lot of the monitoring and controlling activities.

The final phase is closing, and that will involve more status update meetings, inspections, and punch list walkthroughs, which are effectively mobile meetings. These all wrap up with a final close-out meeting to make sure we have documented and met the project goals.

So what did was apparent in the above summary? We will be in a LOT of meetings!

The title of this article is “Meeting Etiquette,” so at some point we need to cover what that means. Since we will not host all the previously indicated meetings, we will be both hosts and guests and each comes with its own form of meeting etiquette. To kick it off, let’s cover the meetings we may host and what good meeting etiquette means for us. One thing we all know is that etiquette is often a matter of personal beliefs and experience. Anyone can do a quick Google search on the term “meeting etiquette,” and get lots of results—39 million+ as of today.



About 39,200,000 results (0.38 seconds)



# Project Management

speak up or have questions need to feel that they can complete their thoughts. Let everyone know that the speaker has the floor and to allow them to complete their presentation, question, or thought.

- ✦ STATE your name before speaking
  - ✦ Many times, meeting attendees will not have met one another other than on a conference call, so it can be hard to distinguish who is talking. By stating your name, it gives others a reference to who is speaking and allows the note taker to indicate who brought up a topic or solution.
- ✦ Do a brief synopsis with some key takeaways at the end of the meeting and let everyone know that minutes will follow.
- ✦ Provide Meeting Minutes
  - ✦ Do this as quickly as possible, while it is fresh in the minds of the attendees. My goal is to provide minutes no more than 24 hours after the meeting and usually less. On some days, when the meetings are back to back this becomes a struggle, but we need to do the best we can.
  - ✦ In some cases, you may want to bring a team member along as an official note taker or record the meeting if it is an acceptable practice at your company. It will be hard to take good notes while answering questions and keeping everything on track and under control. When I do this, I still take a form of shorthand notes so I can compare them with what the note taker wrote or typed. You may have to go through a few teammates until you find someone who is in sync with you on the level of detail you desire.

In the end, because we spend so much time in meetings, people may have to prioritize what meetings they will attend. The better their experience, the more likely they are to attend your meetings.

## et·i·quette

/ˈedəkət, ˈedə, ket/ ⓘ

noun

the customary code of polite behavior in society or among members of a particular profession or group.

synonyms: protocol, manners, accepted behavior, rules of conduct, decorum, good form; More

Just like hosting, when attending meetings you can help make your host's meeting successful, and get more out of it by following a basic list of rules.

- ✦ READ the provided agenda
  - ✦ In order to be prepared, make sure you look at the provided agenda. Make sure if your name or group/team is listed in the agenda that you are prepared to cover your required portion of the meeting. If you didn't get an agenda, it may be hard to know where the meeting will go.
- ✦ PREPARE for the meeting
  - ✦ As in the previous statement, try to find out what the meeting is all about. Understand the importance of

the meeting. Prepare in advance any notes or questions you may have for the meeting topic being discussed. Be sure you bring a notepad and pen or pencil. No matter how good their memory is, most people cannot possibly remember every item discussed during a meeting. A notepad helps in jotting down the important points for future reference.

- ✦ Always keep your cell phone on the silent or vibrate mode. Cell phones ringing in the middle of meetings is considered rude and unprofessional. It is a huge distraction for others in the room and is really a simple thing to avoid. If you do have to monitor calls, keep your phone on vibrate and try not to set it directly on a table as it will often be just as distracting as a ringing phone.
- ✦ Unless it is an emergency or a critical call, do not take phone calls during a meeting. If you must, excuse yourself and step out of the meeting room.
- ✦ BE on time
  - ✦ Show up early if possible, but if you are delayed because of a previous meeting or activity, be sure to come in quietly, find an open seat, acknowledge the host, and start listening.
  - ✦ Showing up early allows for some hand shaking and introductions that you may not get to do otherwise and, of course, arriving early allows you to choose optimal seating.
- ✦ RESPECT the leader or speaker
  - ✦ Don't hijack the conversation from the speaker, whether it is the host or another attendee.
  - ✦ As you may swap the host and attendee roles, the respect you give other people's time will likely get you respect during yours.
- ✦ STATE your name before speaking
  - ✦ Just as when you are hosting, stating your name before speaking gives others a reference to who is speaking and allows the note taker to indicate who brought up a topic or solution.
- ✦ MUTE your phone when not speaking
  - ✦ This is a basic conference call item that we all deal with on large calls such as monthly or weekly account updates. There can be 100 or more people on these calls and if a couple attendees do not have their phones on mute it can be HUGELY distracting.
  - ✦ Listening to people yawn, shuffle through a binder, slurp their coffee, etc. is so annoying when a simple press of the mute button ends it all.
  - ✦ Make sure you know where the mute button is and mute it as soon as you have introduced yourself and leave it that way until you need to speak.
- ✦ FOCUS on the meeting (no multi-tasking)
  - ✦ The meetings you will attend are either to inform you of something or to get your input, but either way, you were invited for a reason.



- Respect the host and the other attendees by not checking your email on your laptop or cell phone constantly.
- Laptops are one of those items that are an often hotly debated item in meetings. Some, especially the younger generation, do not take paper notes, they do it on their laptop. I get this, and if that was all they were used for it would be fine. But I have sat in quite a few meetings where the person next to me is working on emails, proposals, or even Facebook.

## SUMMARY THOUGHTS

Some people are unsure of the laptop etiquette when it comes to meetings, phone etiquette is usually understood, but I see way too many folks checking their email, texting, or surfing when they should be focused on the meeting. You may think it makes you look industrious, but the impression is likely the opposite.

When in a meeting, look around the room, look at your customers, and look at the managers, what are they doing? Are they involved, paying attention, and focused on the meeting they are attending? What do you get from your observations?

How do you want to be perceived? Do you think others are watching you? Are they forming their own opinions of you? Do those opinions matter?

If you are not focused on the meeting because you are using the time to catch up on emails on your phone or laptop or doing work not related to this meeting, then why are you there? Maybe it's

better that you call in. At least the attendees won't see that you are not focusing on the present meeting.

When you are not focused on the meeting, others will notice by your posture, cell phone in hand, or when 45 minutes into a meeting you are asked a question and you have to ask what project this was for.

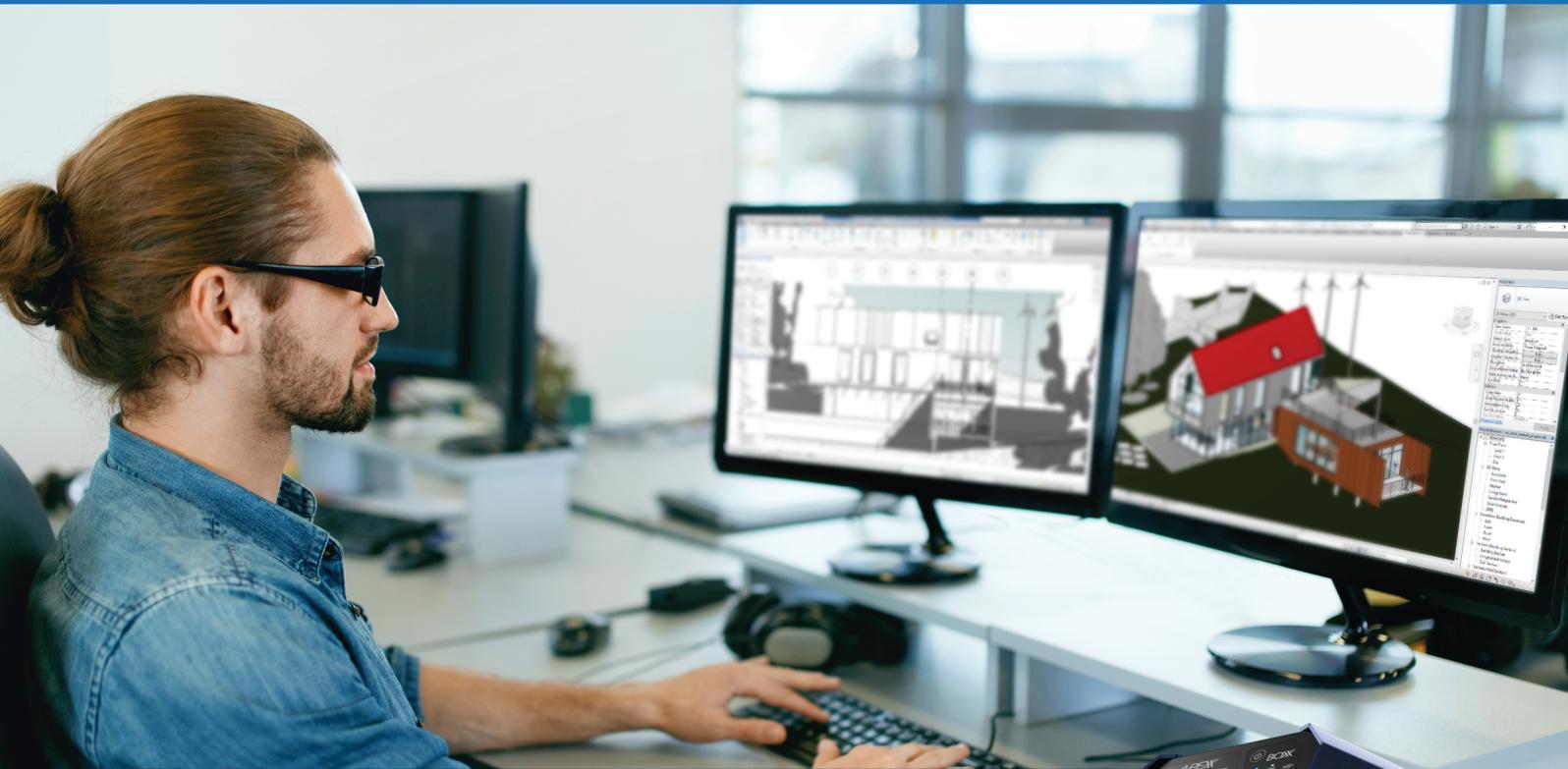
There will be meetings you are forced to attend for some reason, so it is inevitable that there will be a time when you are bored, tired, irritated, etc. But in those regular meetings where you are there as a guest to be informed or to contribute, don't just focus during your portion of the meeting. Instead, stay focused and be professional and you just might learn something new.

Each company has norms and expectations. Learn yours and adapt as required.



*Walt Sparling has spent the last 30 years in the design and project management side of the industry until recently switching to a Senior Project Management role on the construction side. Walt can be reached for questions and comments via email at: [walt@functionsense.com](mailto:walt@functionsense.com)*

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