BUD SCHROEDER: My name is Bud Schroeder. I'm a Senior Customer Success Engineer at Autodesk. And we're going to talk about A360 Drive and some cloud stuff today.

How many guys here, this is their first AU? Raise your hand. Nice.

So one tip I always like to give people-- I've been doing this for a long time-- is talk to everybody. Don't be shy. And anybody that says they're an employee, an Autodesk employee, walk up to them. Ask them how they're doing. Ask themn what they work on. They love to share information with you.

Tell them what you're working on, what you use too. They really like that.

How many have been here to two or more AUs? Lots of you. Good.

How many guys are using AutoCAD? Or an AutoCAD based vertical? This will be a good class then.

Fusion 360? A couple. OK. You're all in the right class.

Just a little note about me. So I've had both my hips replaced. I tend to pace a lot. So hopefully I don't make anybody nervous, but this light is blinding me. These fun rooms. OK. A little bit about me.

So I first started using AutocAD in version 2.6. That's probably why I have new hips because I'm old. Older than dirt. And before that, I used a drafting board. How many guys have used a drafting board? Did you upload your drawings to the cloud back then? Me neither.

And then, so I worked for 12 and 1/2 years for a power utility as the CAD manager, IT manager, and graphic artist. So I wore a lot of hats. And then I used the drafting table there and also AutoCAD 2.6. I worked my way up to AutoCAD release 14, and then went to work at Autodesk. I'm just starting into my 20th year at Autodesk.

And then I was 15 years on the AutoCAD team as a Senior Test Engineer, working on features like install, licensing, customzation CUI. And then the last thing I worked on was the sync component, which is one of things we're going to talk about today. So I know it really well. Too well, sometimes.

And then the last 4 years, I've worked on the A360 team working in the club platforms, which is the other stuff we're going to talk about.

So at the end of the class-- so I've broken this down into three basic components. Four basic components. We're going to talk about the new Share Design View in AutoCAD.

How many of you guys are AutoCAD 2017? Have you guys seen the Share Design View? Have you tried it? This will be great. A lot of times people have already tried all this stuff, so it's old news.

And then, we're going to look at the sync and how that works inside of AutoCAD. The A360 desktop sync. I'm just going to call it sync. That's what we call it internally.

When I go out and post in the forums, you go, you need to say A360 Desktop Sync. I go, I'll just say sync. They know what that is. It' syncs stuff.

And then we're going to learn a little bit more about the new A360 Drive. So we changed the UI in A360 Drive not that long ago and it looks a little different.

How

Many guys in here have used A360 Drive? A few of you. OK.

This dry weather is killing me. And then, what we'll do is at the end, we'll talk about what type of files you're creating and whether you want to put them in the cloud or you don't want to put them in the cloud. We get that question a lot about, well, what files should I put up there? Why should I put them up there? And how should I put them up there?

Are people sharing any of their files in the cloud today? Like Box, Dropbox, FTP sites, anything like that? OK. So it's all kind of similar.

And then, oh, the other thing. I left off the best part. So for this last one, a lot of the stuff's going to come in the first three. And so we'll just kind of roll it up at the end.

And then the idea is try to give 15 to 20 minutes at the end for questions. That seems to be a good amount of time.

My last practice run was very close to that. So hopefully, we'll hit it.

So when you launch AutoCAD, I'm going to come out here so I can actually see what I'm

pointing at.

In the upper left-hand corner, if you go to the A360 ribbon, you'll see this is new for the 2017 guys. It's the Share Design View. You'll hear me call it simple share a lot today.

And the idea was they wanted an easy way for people to publish a file up to the cloud. And you could share it with other people that needed to just look at it without having to give them permission and invite them to your hub and all that kind of fun stuff. So it just makes it really quick and easy.

And then another tip I like to give with the ribbon is if you mouse over it, it gives you a nice tip. If you're not a ribbon guy, it also gives you the command. And that's a lot to type.

So if you're into customization, you might want to create an alias for that because it's kind of long. And then F1 Help. The F1 Help's actuall pretty good.

So as soon as you click on the Share, it's going to give you two options. The first option is to publish it directly right away and then open up the browser so you can see it. And the second one is you're going to continue working, just kind of like publishing where it's kind of running in the background. It's doing its stuff. And the idea behind that is if it's a simple drawing, like the one I have open. The one I have open in the background there is a drawing called [? Wilholm ?] that was created with AutoCAD R14. It was a sample [? draft-- ?]

We had a guy named Will who was building a house and they liked the drawing so much, they made it a sample. It's a good demo drawing. So this one is really small. So we'll be able to publish it quickly. We'll do a little bit of live stuff.

I checked it. We actually have an OK internet connection in here. About three years ago, I did a cloud class and there was no internet. It didn't go very long and it didn't go very well. The ratings were awesome.

So you kind of get dinged for a couple of things when you're teaching these classes. One is when things go wrong, which are totally out of your control. And the other one is too much PowerPoint, right? But if you don't have the PowerPoint and there's no internet, you're kind of hosed. So you've got to kind of balance that out. So we'll do some demoing, but not a lot just to show you what it is.

And I actually have it all cued up. So even if the internet went down, we could still get a good

idea of what it is. And then the second one, like I said, is if you've got a more complex drawing that's going to take longer. Maybe you got more sheets and stuff in it. You would pick that one because then you can continue working on your drawing or your other stuff. Sending email, whatever you're working on, while that's going on.

And what's going to happen is you're going to get a notification if you've enabled it that's going to come up. Whoops. It's going to come up over here in the corner. Kind of like email notifications. It's going to tell your file's ready for viewing. It will also send you an email telling you your file is ready for viewing.

And the reason it's going to do that is because you're already signed in up here and it knows who you are.

AUDIENCE: So we have to do the more than just sign in, to use that feature?

BUD SCHROEDER: No. So we'll actually hold the questions till the end, but that's actually a very good point, because the whole advantage is-- and part of why I keep calling it simple share besides it was the code name is it's supposed to be simple so you don't have to be signed in.

Things like the notifications won't work. And there's a couple of other features we'll talk about here in a couple of minutes that won't work. But the whole idea is you get a call from a customer who you're working with and he wants to see the drawing. He's got no AutoCAD. Has No idea what AutoCAD is, but he'd really like to see the drawing. So you can publish this and send him a link and he can take a look at it.

And he doesn't have to sign in, which is-- it's interesting. It's really a big barrier for a lot of people having to sign into something to go look at it. So once the file's been published, it pups up, it looks like this. So you can see you've got all the information over here. You've got the drawing name, you've got the model space, the 2D views. If there's 3D views, you can see that in there, and then you can see the sheets in the layout.

And then up here you've got other options. You've got the-- which we don't have in Drive. So there's going to be some subtle differences between A360 Drive and A360 Free, and this is one of them. Right up here, we can comment, which you can do in all of them. So that's, in this case, where you sent a drawing to someone. He's going to make some comments, and you're really able to see those in the drawing.

Then you're going to get that quick link. You might use that if you want to send the link to someone rather than the email you got. It makes what we call a public share. You put that in your email, you send it off to the guy, he clicks on it, the browser pops open, and he's able to see the drawing.

And then right here, I have a couple of questions to this print. How many of you guys think they need to print from the web? Wow, that's interesting. We get that request a lot, and what this is is it's a-- basically it's just printing to a system printer, almost a screen grab. So I guess if you were going to put something in a folder as a file just to keep it around to remember it, you could do that. Or the other one it does is the screenshot. So you could do a digital copy of it as well, if you just needed it for some kind of record tracking.

When you upload the file, one of the questions we hear a lot is the upload takes a long time. What's happening is while that files up there, you'll see these folders clicking back and forth. First, it's uploading the file. That's what you're seeing here, is the progress. Then what it's doing is what we call translation internally. That means it's taking that file and turning it into something that is viewable on the web so that you don't need AutoCAD. And the nice thing about that, there's over 50 file formats that are supported by this viewer.

In the old days, if you're old like me, somebody sent you a drawing file and you had no idea what to do with that drawing file. It's like, well, I got to give it to this guy. He's not going to have AutoCAD. He's not going to know how to use it. Well, I could go have him download DWG TruView, which is a viewer, but then he's got to install it and he's got to open it. So it's a lot of work. So the fact that we can do over 50 file formats on the free site is pretty nice.

And the other thing that's cool about the simple share is it's using A360 free, and that's one of the things we're going to finish up at the end. We'll explain the differences between the different flavors of A360. It's a big happy family, and that's my story, and I'm sticking to it. And up here we have the link. So it's 360.Autodesk.com/viewer.

So if you get a call from one of your buddies and he says hey, somebody sent me this DWF file. I don't know what to do with it. You could tell them, hey, go to this site. Just drop it on there, and when it's ready you can view it. And so what we found was there's Autodesk.com/viewers was our public link for people that were looking for viewers like TruView and DWG, the different viewers we have out there, the desktop ones.

And what we found was a lot of people were going there, but they weren't finding what they

wanted because they weren't using Autodesk products, but they had Autodesk file formats, and they weren't sure what to do with them. So we built this viewer, and it's actually very heavily used by a lot of people. But a lot of times it's used once or twice. And what's nice about this versus Drive is if it's something you just need to use occasionally, it's a nice-- that thing's going to kill me. It's a nice way to share files with people without having to worry about what's left up there.

The other thing is once you sign in, this file will live for 30 days. After 30 days it will delete itself. There's also a delete icon, you can remove it. Or if you need it to last a little longer, we give you an option when you're signed in to go in there and extend that time frame. So in most cases, I found that when people are sharing a file or something quick like this, that 30 days is actually more than enough.

And then the last thing when you're signed in that's new that's different than the other menu I had, because we had saved to A360. So if you have an A360 team, or personal hub, or the Drive account, you can say that up there because maybe you need to do more work with it. It's got to last a little longer than 30 days.

And this is the public link I was talking about. They're short links. So that's what you would do. You just copy this into your clipboard, bring up email, and send it. They're talking about maybe having a email link that would kick up your default email on your machine to send it, but right now this seems to work really well for most people.

OK, well let's do a little live demo here and show you how it works. So I have AutoCAD running here, and I have Wilhelm open. All the fun stuff. And I'm just going to come up here, I'm going to click on and design share, and it brings up this dialog box. I'm going to tell it to go ahead and publish it. This is where you play that jeopardy music.

[HUMS JEOPARDY THEME SONG]

This is what the screenshot was I was showing you a few minutes ago. And then a folding icon to let you know that it's doing something. Oh, nice.

[LAUGHTER]

Because it worked like five times before you guys showed up, right? I had a friend years ago that worked for Autodesk when I wasn't working at Autodesk, and he told me, he goes, what

can go wrong, will go wrong in a live demo. But look at that. We don't care, we've got it over here. That's the other thing. So one tip that I'll give early-- I was going to give this tip later.

We do see occasionally, you'll get something like that where it tells you the file failed, and will ask for the error message, and things like that. And what it is is when you're uploading that file, the first piece is the upload. That part usually goes fine, and then what happens is it's translating that file to turn it into something that the web page can view, and something gets tripped. And nine out of 10 times you wait five minutes, re-upload the file, and it works fine.

So it's some little hiccup. Maybe there's a-- somebody unplugged something between you and the cloud. So I go back to the old days when it was mainframe CAD. When you'd get up in the middle of the night to get terminal space for another computer that was like 3,000 miles away, and it's really the same as the cloud.

So here, I'll bring this up here. So here's where you would add the comments. So you could say hey, this is nice. Can you get some dimensioning for me? And then down here toward the bottom, I don't know if you can see my-- oh yeah, you can see it fine. So you can take measurements with this. So if you guys haven't seen this yet, it's a nice thing to use on the field. You can also-- I didn't mention that, but you can also use the Drive stuff or the Team stuff on your mobile device with a free app that we have at Autodesk, A360 Mobile.

And then this right here is really cool. I'm glad I added it. It's called Live Review. So how many times have you been working with someone on a drawing, and you go back and forth sharing information, not quite understanding what each of you are saying? What this will allow you to do is you could be on the East Coast, I can be on the West Coast, I can send you this link, we can both look at this drawing at the same exact time using Live Review.

And then if it's a 3D drawing, we can be rotating the drawing. You might rotate the drawing, zoom in and say, what's this mean here, bud? I'm not quite sure what you meant by this when you made the changes in the drawing. And I go, oh, that's what you meant. Boom. We're fixed, everybody's happy. And you can have more than two people in there. It also brings up a chat dialog box. So you can text back and forth.

There's no there's no audio with it. Some people asked, maybe some voice over IP or something in there, but you could also just pick up your phone and call them, and do it at the same time. So it's a nice way to collaborate really quickly and easily for a quick question. Because a lot of times you can answer that question in two minutes on a live review that you

might have wasted 20 or 30 emails on.

Or you'd be on a phone call forever going, well, I'm looking at the drawing and it looks fine to me. And then all of a sudden it's like, oh dude, I didn't realize it was that drawing you we're looking at. I'm looking at a different one. So that's the live review feature. And since I had so much luck with the other one, I'm not clicking on it.

And then like I said, measures. So you could go out there and gets some quick measurements. How many people in here have used Design Review? So this measure works a lot like Design Review. It's like close, not perfect. It's meant to give you an approximation of a measurement. It's not meant to go out there and do a construction drawing, and say look, it's 17 feet, two inches. It needs to match that. No. It's just to get you in the ballpark so you say-- you know if it's showing a mile, there's something wrong, right?

And then layer's. So you can toggle layers on and off here, just like you would in the drawing. And then you get into the properties of the drawing, and then here are settings. And you'll notice I have a black background right now. This is something that's been requested for a long time, and the development team was awesome. They snuck this in and didn't tell us.

This is my coworker, Brett, by the way. We were going on saying, oh yeah, that's really cool, yeah. We've been letting them know you guys want that, and all of a sudden, I'm on an email thread, I went, hey, it's in there. Thanks for telling us. I'm telling these guys, no, it's not there yet. So I can toggle that between a white and a black background. How many guys work in AutoCAD with a black background? It's easier on the eyes, huh?

I was trained as a graphic artist and I forced myself to work in a white background for many years, but now that my eyes are older and more tired, I like that black background. And that's one of the things I did just before the class starts. I put this up and I changed it. And then there's also navigation settings. So there's some real basic simple things you can change in here. And as we get into Drive, there's different options that are available.

Also one thing I want to share with you, Live Review is not available in drive. It's only available in the free viewer, and part of the reason for that is we use that kind of a test bed because there's a lot of people going through and using it, and we see what they think. Also there's more 3D file formats in Measure that work in this free viewer, than there are in the-- for money version, or the Drive version. We are looking at adding more as we go forward.

Then we've got settings. We just looked at that, and then full screen. So if you need to go to a full screen, that's actually a nice feature. So if you're in a conference room and you're doing the live review, and you've got some other people on a conference call, you can flip this to full screen while you're projecting. And then we talked about print and screenshots, and that's basically it for the simple share.

So it's very simple. It's easy to use. How many of you guys think that's something they could use? All right, that's good. And then like with anything with Autodesk, try it. Try it with files that are small at first to get the hang of it, and then start moving into bigger projects, and you'll start catching the limitations of things, and see what you think. Let's close this back out. Bring that back up. Get this caught back up.

Okay, now we're going to move over to the Sync component. How many people are using Sync today? Only a few. OK, so this will be good too. So back in AutoCAD 2013, marketing had done some research and they said, hey, we need something that will sync files up to the cloud for people. And A360 Drive already existed, and the team that created A360 Drive, created the sync component.

And I was on the AutoCAD team, and we were the first team to consume it. Well, the majority of the products that come out of Autodesk are based off of AutoCAD. So AutoCAD based verticals, and AutoCAD LT all ship with the sync component, and then Inventor. So those all ship with that.

The initial idea was not for an enterprise solution, where if you work for a big company, a big corporation, and you're sharing thousands of files, it's not like Visual Source Safe, or Vault, or Buzzsaw or something like that, where files are checked in and checked out. It was really meant for the guy that works for a small shop who wants to have his files up there for when he needs to look at them, and he can go home, and he can sync them down to his local machine.

Maybe he's got to do some work over the weekend. Or he's headed out to a client site with his laptop, and he just wants to make sure that he's got the latest files synced to his laptop while he's on the road. And so that was the real idea behind sync.

There's three different main-- or actually four different areas where you see the sync component. So up here in A360, that's the rhythm panel, and if you didn't install sync-- some people do that. A lot of people really don't want their files syncing to the cloud until they're ready to. So they would not install this component, but then they were confused about why this

stuff is grayed out. Well it was grayed out because there was nothing there to drive it, and then you got to go back and install it. I'll show you another way to stop sync from syncing if you don't want it to.

And then we can share the document. We can open the local sync folder. We can open the web folder, and we can sync your customization, and we can choose what setting. So there's two things in sync that are happening. A, are the files, the drawings you're working on, and B is the customization. How many guys do customization? OK, you guys share the customization with people? OK. That's not what this is for. And I've got another way to show you that's better than that, and we'll get to that.

So when you go into the options dialog box, there's an online tab, and as long as you're signed in-- I have everything opened up right here just to make it easier for the presentation, but you'll see on the left side, that was initially intended for the drawing files, and on the right side, that was for your customization.

And back in 2013 and 2014 of AutoCAD, we did a thing called automatic sync. And what it did was, any file, as long as you opted into it, and it was opted out by default. But if you opted into this, any file that you saved that you worked on would be synced up to A360 Drive automatically. And what it did is it created this automatic folder in your computer name, because you're saving from multiple machines, so it could distinguish between them, and I got so much hate mail.

Why are my files up there? I didn't say you could put my files up there. And I go back and say well, you clicked the check box to turn it on and you agreed to it. I did not. And so I would go through and I would do some screen shots, or a little video and say this is what-- oh, you're right, I did do that.

So in 2015, we had so many people upset about that, we took that feature out. So now we have more people upset, but they're less than the people who are upset because we were automatically syncing. And the only difference is now when you sync your files, you're going to do a Save As first, and you're going to pick the sync folder to upload those files to.

And then on the customization side-- push the right button this time-- there's a check box here. My recommendation before I even explain it to you is uncheck it. Don't check it. It's going to drive you crazy. You're going to be looking for your files and they're going to be different. And I'm going to tell you why they're going to be different. And it was a really cool idea, and it

worked really well when we first implemented, but the problem is AutoCAD is very dynamic. And if you've done any customization in AutoCAD, you know.

Now we have the CUI, we have Workspace, there's all that kind of stuff. So if you take the layer palette, for example, and you open it up and you dock it, you've made a change to customizing AutoCAD. You're actually customizing AutoCAD. That stuff is stored in the registry. The screen position's in there. That stuff's going to get synced up. So it thinks it's changing it.

Now you go home and you do something different, that gets synced up. Pretty soon the feature that made sense when we did it, is confusing itself. And now you're mad because you got the settings that you did at home, at work, and you really wanted the settings from work at home. And that's why I say uncheck that thing.

And the other thing was actually a really good idea, though, is some people didn't want to sync everything. So you could come in here, and you can break it down, and decide which parts you wanted to. The reason the custom font shapes and line types are broken out is when you bring these components back into AutoCAD, if you're syncing them from the web it's going to require a restart of AutoCAD to be able to see them.

The other place you'll see information is up here in the right hand corner. I talked about that a minute ago. There's a lot of sync stuff in here, but it's actually your Autodesk ID. So if you do any posting in newsgroups, or you purchase anything like that through Autodesk, it's coming through your Autodesk identity, and that's where this is signed in. So you'll see like my-- I always share my email address, Bud.Schroeder@Autodesk.com. It's real easy-- and actually, even Bud@Autodesk.com will work.

When you're signed you can see all this information, and you can see in this case, I've turned everything on. And this is what I was talking about a minute ago. So if you do a File Save or Save As, because you're signed in up in that upper right hand corner, this globe right here is displaying, and it's showing you the A360 Drive folder, and you can save that file there.

One thing that I recommend to people, it's just like if you're using File Explorer or anything else inside your computer. Create a folder that makes sense to you for what you're saving up there, because after a while, you'll see later when I go into the live demo, I have so much stuff in there, I can't find anything.

I've resorted to cheating using 000AAA to force stuff to bubble to the top so I can keep track of it, because I get a lot of files from people like you, that I'm chasing down issues with, and I need to leave them up there for a long time. So it's just easier for me to deal with it that way. If you don't have a lot of stuff you're syncing up there, and you're using folders that make sense to you, it's really easy to find it.

I totally lost my train. So anyway, the tip was right-click here and you can create a folder, and you can save it there, which was much better than the automatic sync that we were using before because it would bubble down to all the paths, or whatever you had. How many guys, their files are out on a network versus out on your local machine? So then you would get a long path dealing with the network information.

You also have an icon in the system tray in the lower right-hand corner, and you can right-click on that, and you'll get a menu. And this is actually very important because those two places, or three places that we get information from that are very helpful. And I said earlier, if you've got something that's syncing-- maybe you've got a big data set, but you do want it to sync, but you're trying to work on some stuff, and you don't want it killing your bandwidth.

We actually throttle sync because we don't want it to kill your bandwidth. So it takes a long time. So it will be syncing in chunks throughout the day. So that's one of the other things that people ask about is my stuff's not up there. I'm not seeing it yet. Well, you've got to give it time to finish syncing, especially if you have a large data set.

Maybe you're headed out the door, and you've finished this drawing, you did a Save As, you put it up there. Click Sync Now. That's going to force it to start to sync. It's going to ignore the delay, and it's going to start pushing those files up right then. But it won't be just the file you're working on, it's any files that have been modified. And if you don't want it to sync, then you could push the Pause Sync Now.

And then the other one is, if you're out on the forums and you're asking questions, Brett and I will say hey, what version are you using? And when you go into the preference dialog box, that information is stored right here. So AutoCAD 2007 7.2.3.1800. That's the latest version of sync.

And the other thing that's kind of a key point here is this check box. If you do want to use sync, and you just want the files up there, and you don't want to worry about it. You just want them up there almost like a backup so that you can get to them if you need to later, leave this check

because every time you restart AutoCAD it's going to automatically launch this program. So it's running in the background.

Now, if you have a problem and you're chasing something down, we're going to ask you to get some log files and a database file. We're going to ask you to uncheck that. Sign out of A360. Shut down AutoCAD and restart your machine so that AutoCAD will let go of those files, so you can copy them, and then we can look into it. Because there's actually a log file that tracks all your files, and it's on your local machine, and that's how we help troubleshoot issues you might have with syncing.

And we talked about the sync now, and that's the other part. And this comes from the old help. We don't have this in the new help. I was thinking, Brett, we need to make a little knowledge base article for this, so it can live on. So it tells you the different statuses of the different icons. So the first one is it's you're currently signed in, and the icon is lighter. The second one, it's pause. So you've got a little pause button on there. And then the third one is a green check mark. That lets you know that it's synced.

Now, these are all going to come-- in AutoCAD, when it's running, they come up down here. You're probably never going to see them because you're working. Then if it fails, you're going to get a triangle with an exclamation mark, and it's red. That let's you know something didn't work because you might come onto the forum, and say hey Bud, all this stuff was working, but my file's not there. And I'll say, oh, did you get any errors? And I'm going to ask you to go back and look.

And then here you're signed out, so the icon's darker. So that's the difference between those two. And then down here we're looking at the file level, and this is what you can look at on your end that you can see in the sync folder. And you'll see the spinning globe with the arrows. That let's you know it's still syncing. So if you're looking on A360 Drive, you've got the browser and you go hey, there's no files up. Then where are they? Go back there and look. If that thing's still spinning, it's still pushing it up.

And then the green check mark tells you that it worked, and the red exclamation tells you something happened, and the file didn't upload. And that's the same as the error we saw in the simple share. A lot of times that just means something failed in the process of copying it up. So sometimes you can wait a little bit, re-sync the file and it will work. Or you'll come back later and if it's actually a green check mark.

From inside of AutoCAD you can see all the folders, and this is what I was talking about. You can see my cheat to keep track of all this stuff. So you see they're all green check marks. So you know they work. So even from inside of AutoCAD, you've got an idea of whether these files are working or not, and then you can compare that.

So if you're going out on site somewhere, and you know you need these files, take a few extra minutes, bring up A360 Drive, the website, and compare. Just make sure your file's there. Make sure it's the one you want, because you'll see there's a time stamp and stuff on it, and you can actually view it. Of course, I cropped that out, didn't I? And then you can also see the folders there.

It's just because I talked to a guy a couple of weeks ago, and he was working with an architect. The architect was doing stuff during the day, and he was doing contract work for him. So he was doing it in the evenings, and they were having problems with their files. Well one of the things he was doing was he was trying to head out the door and get home, and he would kick off the sync and then turn his machine off. Well it's never going to finish because the machine's turned off.

Yeah it was-- well you know, he just had no idea. He thought it would go up there instantly. It's really simple now when I explain it, but it took two weeks of back and forth, and finally a phone call, and a go-to meeting to finally figure out what was going on for him. Because sometimes when you're asking someone technical information for something like this-- I mean, you don't care why it doesn't work. You just know it doesn't work, but I need to know the details so we can figure out how to fix it. After a while you get a little frustrated. Stop asking me that, Bud.

So there's simple ways to check it, and there's also another way. So we were talking earlier about when to use sync and when not to use sync. So if you're syncing files for, like I said, you're heading out to a remote office or to see a customer. I would recommend not even using sync. I would recommend opening up your browser, creating a folder or using the folder that already exists up here, and drag and drop that file up there.

Wait a few minutes, watch it get copied up there so you know it's there. Validate that you can view it, shut yourself down, and take off. You know it's there, and it's worth the extra five minutes it takes. And if it's a small project, you're not working with hundreds of files, that's the best way to go. If you're just putting files up there to have them up there, let sync do it. So that's kind of the difference between why you use the two.

Now, we were talking about the customization part earlier, and I said there's a better way to do this. So back in-- I don't even remember which version. The marketing guys came to me and said, hey, we need some more features for AutoCAD. We need some simple little features for AutoCAD. And because I worked on a lot of the customization and stuff, the marketing guy that was in charge of AutoCAD, he goes, I got this new operating system from Microsoft. It's got this cool feature, and it lets me grab stuff out of it, and copy it over to another computer. And I went, oh, that's kind of cool.

So I started looking at it, playing with it. I wrote this four page design, and what it is is import and export. And what that does is it allows you to take all that customization you're working on and export it to a zip file, and there's a couple reasons that's actually really nice. It's all packaged up nice and neat. If the customization sync what it's doing, is it's making them hidden files up there on the web, and they're all loose files. So you couldn't find them if you wanted to. They're just up there, and you have no way of validating them. This one you know what it is, because you put it up there.

And one of the things I recommend-- so you click this, you click Export. There we go. When it picks the name, it has some random funky name it picks. I don't know, we have to do that because we have no way to guess what you guys want to call stuff. But you can override it. You can change that while you're doing it, and what I recommend-- like can you see what I did here? All I did was to append this with the date that I created the zip file.

I would recommend a little bit more than that. Give the customization a name that means something to you for what you're working on, with the type of customization you do. That way you know it's there. And then this next thing to do is take that file, create a folder up there on A360 Drive because this is going to save it to your local machine, then just copy it up there into that customization folder, and then it's there any time you need it. And if you have a problem later on, maybe you're-- especially when you first start customizing.

One of the things that used to happen to me a lot was I would think I was smarter than I was, and then something didn't work. And then actually, I'm going to backup just for a second. And that's when-- this is another feature we worked on. It's kind of nice. It's not really related to this class, but it's good to know for the guys that are doing customization. It's reset settings back to default.

What that does is it wipes out the roaming and non roaming files inside AutoCAD that are customized, all the customizable files, and forces AutoCAD to do what they call a secondary install, and it copies all those files back just like first time you installed it. So you get back to that original state that you were in when you first installed, and everything worked. And sometimes when you're troubleshooting an issue with customization, this is the best way to get back to it.

And what happened was I was testing customization in the CUI, and when you uninstall AutoCAD, those files don't get removed because those are user-created files that had been modified. So we don't take them out. So rather than flattening the machine, and re-OSing it, I wrote this really nice batch file that would wipe out these folders and force secondary install to kickoff.

And then I'm sitting there like, hey, this would be nice feature for people. I bet product support would love this thing because they do these phone calls, and guys are complaining, saying hey, I don't know what's wrong. It won't start up. So we'll backup your settings and give this a try. That's how we ended up with that.

And then, like I said, if you give it a unique name, you can have multiple copies up here, and you can share these with people. There are a couple of real basic rules about this. The customization can only be imported into the same type of AutoCAD. So if you've got AutoCAD 2017 English, you can share it with your friend that has AutoCAD 2017 English.

If you're running a vertical product, Civil 3D or something like that, with a vanilla icon that makes it look like AutoCAD, that's not the same thing. It's actually a different product, so that won't work. So you would want to make sure it's Civil to Civil, Architecture to Architecture, AutoCAD to AutoCAD. I've shared these files with people. I've fixed customization for customers when theirs were bad, and I've sent them this, and they import it. It works great.

Oh, the live demo, I almost forgot. So we're going to go out of here. We're going to go back into AutoCAD. And like I said, up here, we've got the A360 information here. So this all does the same exact thing that I was showing you in icon in the system tray. So when I right-click on this, and go Sync Now, that's going to force it to start syncing. I don't know if you can see that very well, but my globe is spinning. That let's you know it's working. If you see the globe spinning, you're in good shape.

And then I can pause it. I can open A360 Drive. So this is the local folder, and the reason I

wanted to do this is there's an undocumented way you can use this. But it initially was not part of the intent of the design, but it actually works really well. So maybe you have purchased a suite of Autodesk products. Maybe you're a Revit user and you want to sync your Revit files. You could put your Revit files in a folder in here, and they will sync.

So anything you put in these folders will sync, almost like a Dropbox thing. So it's kind of a nice way to-- so you've got PDFs, documents, [INAUDIBLE], anything you want to put in there, and they will copy them up. There is one file-- I think it's dot L-O-G, I forget. There's one extension they wrote an exemption for because for some reason it was causing problems, and we figured no would ever do it.

And I think I talked to that one customer that did it about four years ago because he got that one error that says, this file format is not supported. And I didn't remember it because it was one of-- you're busy, you're working on a project, and I wrote a bug, and they said oh, we can't fix that. I went, OK. So that's the advantage of that.

Let's bring that back up and launch A360 Web. So all these, they're just like shortcuts. So they're just allowing you to do the same thing that you could do by typing 360.Autodesk.com. It's bringing it in. Oh, and that's the other thing I didn't say. So let's talk a little bit about browsers for a second. This is my service book. It's a Microsoft product. It's a really fast little machine, and I left it to the default browser of Internet Explorer Edge.

So we support IE 11 with all the service packs, because Microsoft actually had to make a fix for us because they had some bugs that wouldn't allow you to see some of the drawings, because we use Web GL for the viewing, and they wouldn't let certain dialogs and stuff show up. So if you're on a machine, and if you're working for a corporate company, and IT says no, we're not putting that on there. You say look, it's the only way I can use it. And then better yet, Chrome.

Chrome is the best browser out there because you can drag and drop folders and files. I think I can do it in Edge, but I can't do it in 11. And then Firefox, it also will work in Safari. How many people are on a Mac in here? Nobody. Sync is actually on a Mac as well. And well, obviously Drive, you can use that on anything.

But like I said, Chrome is the best choice here, and I'm going to slip over to Chrome for a second. Open this up, and there I have Drive. So there's the same thing. You can see the folders. I can come in here. It's going to make me authenticate. I think our web connection

went down. Maybe that's why I got that error message, and now it's coming back. Yeah, we have intermittent cloud access today.

And here's my Wilhelm folder. I'll just open that up. And part of why I want to show you this is because there are some differences between the free viewer and Drive. And down here you'll notice there's no library view. So that's the biggest thing right there. The other difference though is this stuff up here, it's up here as long as you want it up here. And if you make a mistake, and you delete something, there's a trash bin. You can go get it out of it.

OK, let's go back to the presentation. There we go. OK, now we're going to take a look at the new A360 Drive, and the difference there between that and the old Drive. We actually get a lot of questions about Drive, and the new UI, and a lot of confusion. So when you first sign in, you saw that we've changed the UI. When you go to the old Drive, it's a completely different UI with different information there.

So you can sign in, and if you don't have an account, or if you've got a friend that just wants an account, they can also create one for free, and the only difference is if you're on subscription with a subscription account that supports it, you get 25 gigs of storage. That's the only difference. They get 5 gigs of storage. If you're a recap user, I think you get 500 gigs because their files are huge.

And then up here in the top, before I start bringing the next file up, you can see we've got a lot of information here. There's a little drop down arrow right there. That thing's very important. That's what we call the Drive Switcher, and what that does, it allows you to go between if you have multiple accounts. So maybe you have a MyHub account. Maybe you were here four years ago, and you did the tech preview with this, and you created a MyHub account. Or if you you're the Fusion guy, you'll have a MyHub account. This allows you to go back and forth, and switch between A360 Drive, and then there's a Design Graph, which is kind of an open beta right now.

And one of the questions we get a lot is, where are my files? I can't find my files. And because we used to get a lot of complaints about why are they so different, so we made the UI very similar across our products. Well, it seemed really smart at the time. So guys are uploading stuff, and then they're going back, and they're going to Drive, or they're going to MyHub, or they're going to Team, and they can't remember what they uploaded. But all they know that it looks the same and their files aren't there.

So when you go and you switch, you'll find your files. My advice would be if you're not using sync, to move over to Team or to a MyHub account. It's got other things. We'll talk about that in the end, why that's a better choice. And then here's what I call the quick tour. I answer this question probably five or six times a week.

We really cleaned up the UI. We made it really nice, more modern. If you've looked at the old UI, it was very comprehensive. There's a lot of stuff you can do in the old A360 Drive, and so some functionality is not here, and we're working on putting some of that functionality back. It's in process.

For example, there's no search, which seemed kind of strange to me, but we're going to put it in. But we do have the quick filters up here. So you can see all the data. You can see owned by me, shared by me, shared with me, shared publicly, and of course, the all important one, trash, when you accidentally deleted something you really didn't mean to. And we never empty that folder, so if you put it in there, it's still in there.

And if you want it gone, you actually have to go in there just like with your computer. You can right-click on it. I don't know if you can right-click, but you can open it up and get rid of the trash. The only reason I see that question asked is because there's 25 gigs, and a lot of people go over 25 gigs pretty easy these days.

And then over here to the right, upload a new folder, and this is why I like Chrome a little better because when I create a folder, I can drag and drop those files right on that folder. And then down below you can see the space, what's available, what you've used. And then over here, you can see the folders. And this is where people get confused a lot because if you look at the one above, this right here, you don't see these icons. So people weren't finding how to share their files and how to download their files.

We get that question a lot. How do I share this file? Or share's not working. It's not that share isn't working, it's that they didn't realize you have to mouse-over that. If you're in the folder view, you've got to mouse-over the folder. Or if it's in list view like this, you've got to mouse over the line somewhere, and it shows these three icons. So you have shared, download, and then the actions, and then the actions are move, rename, and delete.

And then also sorting up here. One of the things that I tell people to do a lot until we get search in there, if you're looking for the most recent files, for some reason we don't put the

most recent at the top. I don't understand that, but they're going to fix that. They're going to make it a little better. But you can click on this, and that'll put the most recent at the top, and you'll find when you're working on. Where it gets dicey is if you're working on something older that you need to find, then you're better off to go back to the old UI, and use a search and find that. But they promised me, we're going to get search soon.

And then what else do we have in here? Let's see. No, OK, that was it. Oh no, that's not true. Over here we have a list view and a thumbnail view. I like the list view when I'm looking through projects. I like the thumbnail view when I'm looking through files because you get the thumbnail icon, and you can identify the file faster, and that thumbnail comes from whatever product created the drawing.

We also have versions up there, which is actually pretty cool. So if you're working on a drawing, and you realized you screwed something up-- because you can't do this on AutoCAD, but you go, you know what, I really want to go back to that last version. You can go up to A360 and you can click on that version drop down. You can open up version one or version two, whatever it is, and that will open up the file for viewing. So you can see it and validate that that's what you're looking for, and then you can download it so you can get back to that state.

Back in the early days when I was learning AutoCAD, whenever I was working on the edge of something, or a new command I wasn't quite sure what it was going to do, I would do what they call undo mark. And so what you could do is then you could go work, and it's like working with a net. And when things went south, and they weren't working well, you go back to that mark and started over. This is kind of like that. It lets you go back to that, but this is also where it kind of gets in trouble.

So if you're using sync, and you're working on files, and you've shared them with someone else who's working on files, if you're working on a base drawing, and I'm working on a base drawing, you upload yours, I upload mine because there's no file locking, there's going to be your version and my version. Mine's not going to have your edits, and yours is not going to have my edits.

So one of the things I recommend-- and that's like this guy that I was helping that was the architect, because it was a small enough client, I recommended not using sync in this case. And because he was working-- the architect worked during the day, and he worked during the night, this worked out really well. He would upload the files, and he would let the draftsman

know hey, I've uploaded all your files. They're all ready to go. Can you download it and make the modifications?

Because what was happening to them is they were having exactly what I said, the draftsman would have his drawing with his edits, but then the architect would have his drawing without the edits from the draftsman. So they were out of sync. Once he figured it out, it was no big deal. It's just because sync was never intended to work that way, and it's not Vault, it's not file locking.

Also have up here in the right corner-- so we have comments, and download, and then there's help. Comments are similar to what we saw when we were looking at the simple share earlier. And then over here we also have-- there's a 3D queue and a sheet list. So that allows you to-- if you've got a drawing-- and a lot of drawings will have a 3D, 2D, and a lot of sheets, just like if you've created a bunch of layouts inside of AutoCAD. You can toggle through those to take a look at them.

And then same thing down here, we talked about this a little earlier. So you've got the pan, zoom, some camera interactions, you've got measure, and then the layer managers, so if you need to toggle layers, and then you've got the properties, the settings, and the full screen. One thing about the properties that's interesting. So AutoCAD has certain properties, [INAUDIBLE] files have certain properties, Revit files have certain properties, Navisworks files have certain properties. They're not the same.

So what people get confused about is why do I see this property in AutoCAD, but I don't see it in my Navisworks file? We're working on trying to get that stuff all aligned. A lot of these file formats are created by teams that work in different areas, and they never work together anyway. These files are never meant to be shared, but now we've got this cloud storage, and a lot of people are sharing multiple file formats. And we see that question a lot too. Why is it different? Well, that's why it's different. You'd think it would be an easy fix, but it's really not. I think we've given these guys a big headache, Brett.

So this one's kind of fun. I like this. So you click on Comments. So one of the questions we were getting asked a lot is, where are activities? I want to see activity of the file. I've given you guys-- I've uploaded a file, and I'm waiting for you guys to upload a new one, but in the new UI, I don't know where that is. On the old UI it used to be over here on the right, and there's this long list, and I can see Tom's uploaded a new file, Brett's uploaded a new file. OK, so I

know. Well, I've been telling people we're going to put this in soon, and then the other day I'm writing my AU paper, and I click on Comments, and I'm making a comment. I'm making an example and I go, sweet, they put activity in.

No, it's been there all along. I just never saw it because we buried it. We shared it with the designer, and he goes, why is that buried? So we're going to do some UI clean up in here, even though we simplified it. We're going to try to make activity it's own, like comment is so you can look at. We're also going to try to add folder level activity.

The other thing that we're working on is these icons are really hard to read these colors. It's hard to see what they are, so they're going to brighten those up and make the text a little brighter. That's some of the cleanup work we're doing. I think we got a little too simple when we simplified it.

So sharing, part of the beauty of putting files up in the cloud, unlike the simple share, you might be working on projects where a little bit more control. You might have some people you only want to view the file. You might have some people that need view and download, and people that are using sync, they need full access because they need to be able to delete, upload, download the whole thing, otherwise sync won't work. And so you have that ability in the shared dialog box.

So with that share icon that you saw earlier, you click on that and it brings up this dialog box. You can put in your email address here. If you've got multiple people you need to add, you can use a comma to separate them. But whatever you're adding, you're going to have to do the permissions separately. And then down below you can see the manage. You can see I have alter egos, and so one I allowed a view, one is the owner.

If I need to change that I can go back into that share icon, like you saw in the folder view or the file view, depending on how you're sharing it, and I can change the permission, or I can remove them. So maybe you've got somebody that's been working on the project, and they've moved onto something else, so they've left the company. You can use that to change them or remove them from the project.

There's also the public share. So similar to how simple share works, we'll allow you to create a public share, and the difference between the public share and what you saw on the simple share is there's an extra button down here. So you can say yes or no to download. So inside of Drive, if you've got a guy that just needs to look at a file, and you don't want him to

download it, and you know he's never going to sign into A360, then go up here and click on Share, and then pick the public share, and make sure that's checked, and then copy that, or copy to the clipboard using that, and send him an email.

If you're done with the share, and you don't want people to access it anymore, go back into that folder-- and this only works [INAUDIBLE] folder. This only works on files. There's no public share for a folder, but it does work for a file. You just uncheck this, and that removes the share. And then later on it for some reason you need it back, you can add it again, but that link will change, and so you'll have to resend the email.

So that covers-- oh no, we've got to do the live demo. we're going to go back over here to Chrome. We're going to click Home. That's the other thing, if you get a little lost in the UI, and you want to get back, this globe right here will take you home, so you're back to the start. I'm going to click owned by me. These quick filters are just something that shows you quickly what you own and have uploaded.

You can see what's been shared with me. There's probably nothing up here. I can't remember-- no, there's a lot of here. Oh, shared by me, sorry. This is shared with me. And then shared publicly. So that's what you just saw a minute ago. Those are the publicly shared files. And then trash, I've left some stuff in here just so you could see it, and then you can empty this. And then one other thing I will point out while I'm in here is you can always post to the forums if you have questions about this stuff.

If you're having an issue, specifically, you're seeing in here, you can actually click on this megaphone. It's going to bring up a dialog box, and you can put some text in here. Click next. Put your email address in. Select your product. You don't have to do all this stuff, but it makes it easier. In this case, I'm going to pick Drive, and I just got a question, and I can send that message. That's going to send a message to this other application we use, and Brett or myself typically respond to almost all of them.

And what's nice about that is it will tell me when we get that email. It will tell me that you're using Drive, so that I can see-- we see this a lot, they'll be the guy who's like, I can't find my files. Where are my files? And so I get a tip, at least, of what he's using because I see the link to the site he's using.

And then let's go back to all data. Going to click on the AU. This is the customization folder I was showing you earlier, and so I put the zip file up there. So you can just download that, and

then you can run it from inside of AutoCAD. Sorry, not instead AutoCAD. You have to shut AutoCAD down when you run that, and then that will bring your customization over. So if you've got a new machine, or you want to share your customization, you would download this at home, and then import these settings.

And then back to home. Also, there's kind of a trail. When you click on this, you go back in here. You can see the folders are showing up up here. So it gives you an idea of where you're going. So you can go back one folder if you need to, and then I'm going to click on Wilhelm. This is where the public share is. So I want to turn that off, I can do that. It says sharing turned off. So that's how I disable it. I can turn it back on. In this case, it's not going to change because I haven't done anything, and I can disable the download.

And I can also preview the link. Watch, we'll get another error here, right? No, it's going to work. It's because I expected it not to work. So you can take a quick look at it before you send that link out to make sure it's working.

[APPLAUSE]

And that is the basics and there. So let's go back to the PowerPoint. Open that back up. There we go. OK, and then so now-- I'm actually a little ahead of where I thought it was going to be now. You practice this stuff, and it's either a little fast, or a little slow. Sometimes I get excited and talk too fast too, that never helps. So we looked at the shared design view in AutoCAD. That's a simple sharing.

So like we were saying, when we were talking about it, if you've got somebody, you just want them to get a file, get a look at it, and see how it works, you can use that. If you've got the desktop sync, and you're syncing files have them up there in the cloud and always available, and you don't want to do anything with it. You're just putting it up there almost like a backup, because I do see people say that all the time. It's not really a backup, but it just kind of makes you feel better they're there. And if you were a client's office or something, and you wanted to show someone, you could do that. So that's when you would use sync.

Small projects, when you need those files there, and you're headed out the road, and you don't want to worry about whether Autodesk is taking hours to put your files up there, or they're going to put them up there in 10 minutes, drag it and drop it up there because you can see it. You know it's up there right now.

I said I would talk a little bit about the A360 family. So the first venture into the cloud was A360 Drive, and that's why we revamped the UI because it was very 90s looking, 2000s looking, so it was old. Actually, I kind of liked it, but a lot of people were complaining about how it looked until we made the new one, and they couldn't find stuff, then they liked the old one. It's kind of a trick, right?

I was a graphic artist, and I would do portrait drawings and stuff, and I had this art teacher tell me one time, you're making money on your drawings. Find one little thing and purposely make it wrong so that the client will focus on that, and then when you fix it, they're happy. Maybe we should do that with software. Make one little thing wrong and then fix it.

And then A360 Personal Hub. So four years ago, 3 and 1/2 years ago, we came out with the tech preview, which was where we were going with the cloud based sharing solution and collaboration stuff, and what that was, it was a personal project. In this case, I'm actually talking about the single project. So it's one project and five gigs of space. You can have more than one project, you have to archive that project, and then create a new one. And that, you can go sign up for free. So it's like the Drive thing I showed you earlier. It's very similar, and the link is in the paper if you download the paper.

And then A360 Free, which is what we were looking at for the simple share, and that's something that's nice if you just want to try it out and see how things are working. If you've got people that don't really want to deal with an account and all that stuff, this is a great place to send them. And then we have Team. So Drive and MyHub are personal. That's meant to be for an individual user. You can share with people, just like you can with anything else, but it's really meant to be peer to peer.

Team is a place where everything can go, and team is project based, while MyHub and Drive is file and folder based. So in Team, what you're going to do is you're going to create a project, and you're going to invite the people that need to be in that project. Then you're going to create your folder structure under that, and upload your files. You're going to have activity, you're going to have comments, there's a lot of information there. It's actually worth taking a look at, either A360 Free-- not the simple share one, but the actual five gig one because it's pretty much the same thing, but it lets you take a look at it. Or sign up for the 30 day trial, and kick it around, and see how it works for you.

But what we did recently is we changed it. It used to be A360 Team, now it's BIM 360 Team

and Fusion Team. And part of why we did that is we've got manufacturing in AEC. How many of you guys are in AEC in here? How many of you guys are in manufacturing? How many of you guys are in the middle somewhere?

So the thought here is the guys in the middle would lean to the AEC side, and then the manufacturing guys would go there. Right now, BIM 360 Team and Fusion Team are exactly the same, but they look different because they're branded different. And then A360 still is alive too, so we're in a transition period.

So this has BIM 360 Team, and the other thing too that's nice about the-- how many people have seen Team before? Oh. The other difference is that you can put custom images in here to make it easier to find your projects, and you can pin the project so that they stay up here, and they open up. It also has quick filters at the top. You get an activity feed right here. You can see all the stuff that's going on, and the files that translate.

We're working on permissions. That's one of the things that kind of holds people back, there's no permissions. So I can't say-- we did just add view to it recently. So there's a view only model, but we can't say you're in project Autodesk University 2006, but only the Autodesk University people see that. I can't segregate people like that now. And the way around that is you create a folder, and you only invite people in the folder that need to be in there. But we will eventually get permissions in there.

And then let's show you Fusion, which again-- oh, I had a Fusion file open. So just like Drive, I'm going to click on Home. And again, you've got your projects, and you see the basic information, you see activities. So it's the same exact thing except for you've got the Fusion F and the B for BIM. It's the same thing, but the advantage there is when you share something in Drive, if I invite one of you guys to my Drive folder, you're looking at my files when you're signed into your Drive account. It adds the folder. It's not like Team. When you go and you look-- if I share a project with you, and you go look at that project, you're in that location. You're looking at that file.

How many Revit users in here? A couple. So there's Revit collaboration, also which will be tied more to the BIM side so that they can put the central file up there, and you can sync to it. So you've got the combination of the guys actually doing the editing. So you've got that side of it, and then you can also have uploading the Revit files, or the AutoCAD files, or whatever they are, and you can share those with the collaboration side, just for people that don't need to do

anything to the file, but view it.

So that's the family of products, A360 Team looks just like this, but it doesn't have the same branding. Let's go here. There we go, back to here. It's almost perfect, and now we're ready for questions. So any questions?

AUDIENCE: I'm a Civil 3D user. We don't have Vault, but I'm just wondering if this can maintain the linkages of data shortcuts. I'm in the A360.

BUD SCHROEDER: Like I said, there's no file locking or anything like that. If you've got files-- are you talking about linked files?

AUDIENCE: Yeah.

BUD SCHROEDER: Yeah, so you can upload linked files. They call that assembly, right? I always want to say composite because that's what we used to call it. So what it is is just like in AutoCAD when you create a reference file-- so you've got the main drawing, the parent drawing, and then you've got the reference files. It might be your title block and some other stuff, because you can modify those at another time. Those files all have to resolve to a single folder when you upload them, so it knows that they're reference files. That's the part that makes it hard.

AUDIENCE: Do they have to have the same structure in--

BUD SCHROEDER: So for example, if it's an AutoCAD based product, you would use e-transmit. So if you send your files to someone else-- I don't know if you guys know about that, but with e-transmit, you can tell all the reference files to resolve to that folder any transmit, so that when you send me your files, I can open them up and AutoCAD is going to find all those reference files. It's the same thing with Revit. It's the same thing with Inventor. It's the same thing with Navisworks, all those files, it's the same thing.

AUDIENCE: Thank you.

BUD SCHROEDER: Sure. Any other questions? In the back.

AUDIENCE: Yeah, I'm just wondering if there's a lot of [? cloud innate ?] knowledge built into it [INAUDIBLE] formats that it supports? Can you use the sharing tools to share, or upload, or store arbitrary files?

BUD SCHROEDER: Give me an example.

AUDIENCE: Will reference material, just like PDF files or--

BUD SCHROEDER: Oh yeah, anything. We used to do these Hangouts all the time on the Team side, and I would say I can make a project for sharing recipes, if you want. A project could be anything. It doesn't matter. It doesn't care, and we can actually open doc files as well. On the team side, if you go in and look-- including the CAD formats, it's over 100 file formats that are supported.

AUDIENCE: So if it doesn't recognize a file, will it just treat it as a block of blind data? Or will it just--

BUD SCHROEDER: It just won't have an icon, and so you won't be able to view it. But you can download it, you can upload it, you can use it for storage.

AUDIENCE: Oh sorry, one other thing. Does it do versioning in any way? Or checkpointing? Is there any sort of--

BUD SCHROEDER: It's very basic versioning. It's what I call, last one in wins. The last one in is the newest version.

AUDIENCE: Is there anyway to go back?

BUD SCHROEDER: Yeah, you can go pick-- that's what I was showing earlier with Drive. It's the same thing in Team. You go and you click on that version down button, pick the previous version, and that brings it up in the view. You can look at it, validate that's what you want, and then download it, and then you can start there. Because you can't do that in AutoCAD, so that's kind of nice. Now with Revit Drawings, we did add a file compare recently where you can actually compare the versions and see the differences. So we're trying to do that for all the file formats. We started with Revit because that group seems to use that the most.

AUDIENCE: Only Revit can?

BUD SCHROEDER: At this time. We will eventually have it for everything. There's already a tool like that for AutoCAD, but it works inside of AutoCAD. So it's not cloud based, is the problem. We've got one over here with the--

AUDIENCE: Just back to the naming. I want to make sure I get it right. So when you're talking about Team, are you supposed to say A360 Team, or are you supposed to say BIM 360 Team, and Fusion

360 Team? You had those four things there. Are all those names, today, valid names as Well

BUD SCHROEDER: So the valid names right now, as you and I are talking, and this could change tomorrow. Trust me, I've seen it happen. So A360 Drive, that's the old version. A360, which there's a couple of flavors of that. So that can be free or the MyHub, and then you have Fusion Team. Fusion 360 is the editor for Drawing. Fusion Team is the viewer that we had up here, and then BIM 360 Team is the collaboration viewer that we had up here. Those are the valid names today. I know, I know. It's one of those things where people get very frustrated, but once you've got it, it's a piece of cake.

AUDIENCE: But A360 Team, Fusion Team, and BIM 360 Team, they're all the same product, right now?

BUD SCHROEDER: Yeah.

AUDIENCE: They've just got different skins on them.

BUD SCHROEDER: It's called branding.

AUDIENCE: Yeah, it's been rebranded.

BUD SCHROEDER: There was a question over here.

AUDIENCE: Is there an upload or download limit to the Drive?

BUD SCHROEDER: Oh, for Drive? OK, I'm going to tell you what development tells me, and then I'll tell you what I've seen. Three gigs, and that's partly by the operating system. I have found, sometimes, depending on the type of files I'm uploading, if I'm uploading images-- I'm an amateur photographer. I put a lot of photos up there. I can put 300 photos up there, and it'll work fine, and sometimes I can put 1,000 up there and it works fine.

And then sometimes it gets really upset. I won't use the other word I was going to say. And it won't let them upload, and what you'll see happen is they'll start to upload, and they'll go down. And what we've seen is there can be an issue with your cookies and your cache. So if you clear your cookies and your cache, the uploads will work. But technically three gigs is the size. But I have found that 300 to 500 meg chunks works much better. Does that answer your

question?

AUDIENCE: Yeah, [INAUDIBLE] multi-office collaboration, and you throw a project out there, and it's ten gigs. Do you [INAUDIBLE]

BUD SCHROEDER: No, you can put it all in one folder. Well, you said Drive. So Drive is our older technology. So we put a new face on an old technology. It's more brittle, so it's going to have more problems, and it's going to trip over things when you start putting-- so that you might need to break up. Team on the other hand, I've thrown two gigs up there at a time. I don't know anyone that's been able to put-- like recap and things like that, I think those guys are getting away with it, but I don't really know. If you email me, Bud.Schroeder.com and remind me, I'll try to find out for you. Any other questions?

AUDIENCE: I have a bunch. Just about the model for commenting.

BUD SCHROEDER: Sure.

AUDIENCE: Is it a linear comment, comment, comment? Or you can have threads of comments and replies to comments?

BUD SCHROEDER: Well, in Drive it's linear. In Team, I think it's not really threading, but it'll--

AUDIENCE: [INAUDIBLE]

BUD SCHROEDER: You can also delete a comment in Team. You can't do that in Drive. I don't recommend deleting the comments because it's a record. Right?

AUDIENCE: Yeah, right.

BUD SCHROEDER: Any other questions?

AUDIENCE: I just wanted to ask about the in-app help daily seemed kind of cool. You mentioned maybe that it was something else. Is that another Autodesk thing that you're making use of? Or is something you guys wrote?

BUD Oh, you're talking about the feedback link? So that's actually a tool, a third party tool. It's a

SCHROEDER: feedback tool, or a widget. Oh,

AUDIENCE: I see.

BUD SCHROEDER: And so that sends-- it's a thing called User Voice, and what we like about it is it also lets get stats. So Brett and I can say, I had 50 guys ask about search. Maybe it was two. With User Voice we can actually say no, we had 50 guys ask about search.

AUDIENCE: [INAUDIBLE]

BUD SCHROEDER: Right. Any other questions? All right, well thank you very much. I hope the class was helpful, and like I said, Bud.Schroeder@Autodesk.com if you've got any questions. Or use the feedback button inside of Drive.

AUDIENCE: Thank you.

BUD SCHROEDER: You're welcome.