PRESENTER: Ladies and gentlemen, please welcome Autodesk technical Evangelist, Lynn Allen.

[MUSIC PLAYING]

LYNN ALLEN: Thanks. Thank you. Oh, wait, computer went down, of course. Can you guys see that? No. Sorry. I have now built in security. So if you don't touch your computer within 15 minutes, it shuts down. It's lovely, lovely. Especially when you're going to be presenting in front of hundreds of people.

So welcome, welcome. Having a good time at AU? Who is going to the party tonight?

AUDIENCE: Yes. Yes.

LYNN ALLEN: Yes, how many of you've already been partying, you won't even know it there's a party tonight? All right, kind of noticed there was a lot of partying going on this year.

So, thanks for coming to my session. I have a very important role I need to fill. I need a time keeper. It's a really complicated-- let me tell you first how it works. So this is an hour long session and every 15 minutes, if I'm too far behind, you go like this, hey or whatever you want to do, or throw something at me. And I have a chair right here for someone who can handle that very important responsibility. Anybody?

OK, everyone's pointing at you, just so you know. Did you notice? The young lady at the end of the first row, she probably doesn't even want to do it. Do you want to do it? Yay!

She had her chair all nice and comfortable and now I moved her to an-- that's a cold chair incidentally. You got that one all nice and cozy. Thank you, thank you very much.

In the PowerPoint, it actually has the time. It's easy. Just don't let me get too far behind. OK, what's your name?

AUDIENCE: Amy.

LYNN ALLEN: Amy, thank you, Amy, I appreciate it. All right so for this presentation, I have to go really fast so I can only be so funny. You just have to realize the humor is going to be dialed down a little bit because I have to go really, really quickly. But before I do anything, I want to actually see what release of AutoCAD you guys are on.

All right, who is already on AutoCAD 2017? All right, who is on AutoCAD 2016? Yeah. 2015? 2014? 2013? Afford to go to AU, but we can not afford to upgrade our software. 2012? Now you won't raise your hands, now won't you. Anybody 2012 or before? We will pass a plate around for you. A little car wash going on out in the back.

OK, all right, good, good, good, good, good. All right so I would like to make another comment that, my goal here is to show you in 60 minutes as many tips and techniques-- I even actually have a few more than 60, that will hopefully make you more efficient at your job. And that when you go back to the office hopefully you'll try a few of those. Most of the tips in this session, a good chunk of them, are from AutoCAD 2017. So if you're already on the software, it will give you a chance to maybe try some of those features.

Because let's face it, when we upgrade, we just keep using the software the same way we used the release before, and the release before that, and the release before that, right. I'm just as guilty in other software. And for those of you who haven't updated yet, this will give you chance to see what's in that software.

And see if something that you might want to upgrade to. But don't worry I have tips that go all the way back to 2008 or whatever. So we'll have a little bit of everything going on there. All right so hopefully that will work for you. I'm going to get started. Are you ready? Oh my God, they;re at the edge of their seats.

So With AutoCAD 2017, by far the biggest crowd pleaser, is the fact that now you can import PDF files as AutoCAD objects. Yeah.

AUDIENCE: Yeah. Whoa.

LYNN ALLEN: Whoa. Number one on the wish list for a long time, every year Autodesk is just like whatever, thanks for sharing, I know that you wish for that but we're not going to grant it. And finally they did and they did an excellent job at it. Who's tried it? Who's used it? Is it awesome?

And if it's not, I want you just to say it is. All right, OK, good. So I'm going to actually just jump over because of the limited time frame. And you know I'm already behind by three minute. But that's OK, we're going to catch up. If we have enough time, at the very end of the presentation is the oh so popular, ways to torture your coworkers, section.

For some reason, that seems to be the most popular part of the class, which causes me a lot

of concern actually. I took it out one year and oh my gosh. Oh my gosh. So I put it back. So here we are inside of AutoCAD. Here we go. Ya, ya, ya, ya and this happens-- Actually, you know what, over here, I'm going to talk to this just a little bit more actually.

So there's two different ways that you can bring PDF files into AutoCAD. One is if you have a PDF underlay and you already have it in there, you want to convert the objects to AutoCAD objects, you can do that with an existing underlay. You just simply window the objects, select the ones that you want. Or you can use the PDF import command and have it bring in the PDF file in and convert them all to AutoCAD objects. OK, so it's completely up to you.

This is way better than the way we used to do it, bring in the underlay and trace on top of it, right. Because boy wasn't that fun? Yeah, that's when you really want to get paid by the hour, for sure. That was not a lot of fun.

So this is a PDF underlay. So I'm just going to go ahead and I'm going to click on this. And you will of course see that the ribbon will change automatically to say, hey it's PDF. It only gives me options for PDFs. And of course I know you're all using the ribbons. We have no ribbon rebels in the audience at all today.

And I am actually going to turn off a couple of layers first. I don't have to, but just to make it a little easier to visualize let's turn off a few layers. [INAUDIBLE] It would translate those dimensions over. Just they wouldn't be dimensions. They would be individual lines and texts and things like that.

All right, so very simply, import as objects. This guy, I'm just going to go ahead and window what I'm after. And you will see that. So it did ask me if I wanted to keep the underlay. I said no I didn't.

So then you would have a combination underlay and AutoCAD objects. I just want to focus on the fact that it was able to convert them. Now let's see what we got. All right, let's see, we've got, polyline did a pretty good job joining together. I appreciate that.

You will see a polyline and a polyarc joined together, circle and so on. It does not know this is a center line, the new center lines or anything like that. But, hey, it did a good job, right. Ya, way better than tracing. If you do get paid by the hour and you have to do this for your job, don't upgrade. Very simple, all right, but most of us will probably do, is we're going to want to go to Insert. We're going to want to go to PDF import.

Conveniently I have one in a directory, easy to get to. I want to bring in this particular PDF file. You can see that it has several sheets. I'm going to insert sheet number three. Let's take a look at what we see on the screen.

I happen to know my scale factor for that PDF was a quarter inch equals a foot. So my scale is going to be 48, that's right. What else have we got here? Well there's a variety-- wrong side -- a variety of options that we can choose. And these actually will make a big difference on how your PDF file comes in. Do you want it to bring in the text?

Well, I would think so. What kind of text does it bring in? It loves two type fonts. It does not like SHX fonts. It will bring those SHX fonts in as geometry, like polylines and ellipses. We'll take a look at that. It's not a fan of SHX fonts but if you have installed the 2017.1 update, we have ways to get around that.

So if you're a subscriber, you can download that update and you can get around that. OK, what else do I care about over here? Do you want it to bring in raster images? It is more than happy to bring in raster images. It brings them in as PNG files. And you do have the ability to decide what director you want them to land in. And what else for layers? If it was a file that came outside of AutoCAD it probably has all the layers with it. If it came from AutoCAD to begin with, you probably want to import it the same way.

Or maybe you want the objects to go on the current layer. Or maybe you want them to be broken up by object type. Probably want to pick that top one. And then over the lower left hand corner there, do you want it to join line and arc segments? Of course you do because you want as few objects as possible. I'd like to point out that bottom one, infer line types from, collinear dashes. Because that is off by default. If it is off, that means if you have a dash line type, you're going get all individual objects for the dash. That doesn't sound very good.

Look he's like err, right. So it doesn't sound very good. So I would probably say you want that on. Once you turn it on, it will stay on but it's not on by default. If you do find that it is assuming things that are not a line type to be a line type, like underlined text and things like that, it could do that and it's bugging you, then you might want to turn that back off. Does that make sense?

We're altogether? I'm going to say, OK. We'll take a second. I find that it's really based on how many people are watching the presentation at the time. That's how long it takes. That was pretty good.

All right,so let's see what happened? This is a two type font, no problem. It recognizes it as a two type font. I can double click on it. I could edit it, no problem.

What is this is SHX font? What have I got? Let's see, that is a polyline. That is an ellipse. Looks good though, that looks perfect. Looks great but if I needed to edit that, I'd probably erase it and put different text in there, right. So that's kind of a bummer.

Let's see, I have a raster image over here all happy. So this also is SHX text. So I installed the update. You can see on my ribbon these little dots. So I just now found out how to rid of a little while ago.

They're like saying, hey this is new, new, new, new. And I found out you can get rid of it. Do you guys all know this except for me? Upper right hand corner, there's that Info Center up there. You can click on that and will get rid of that. But I wanted to show it to you, so I didn't turn them off yet.

So what am I going to do? I want it to recognize SHX text. Let me come in here and select the objects I want it to convert over to text. And you will see on here that it happily converted it. It was a beautiful thing. It worked out in this case.

To text, I click on it, that's text, that's text, that's text. All right, what really happened in there? There's an option in here, recognition settings, where you basically click. Don't add any you're not using.

You're going to click on the fonts that could be in the PDF file. And then you'll also notice, there's a recognition threshold. If you put it way down low, it will assume everything in the world is text. Don't put it too low. You'll get all kinds of creative things on the screen.

But it does default-- it starts out really high. Not quite at 100 but it starts out really high. And I couldn't get hardly anything to work when it was set that high. So I moved it down to about 75, 80 and it seems to work just great.

All right, low stress, I'm going to say, Here we'll get out of there. All right, got it? OK, so now what? Now I have individual text strings and now I really want to have Mtext. So what am I going to do?

[INAUDIBLE] Mtext, so used to be an express tool, grew up, became a real life AutoCAD command. They put it right here on the ribbon. So I can say combine text. I can click this guy

and this guy and this guy or I could window them or whatever. And it will convert it to Mtext. And there you see, now I'm all good, right. Ya.

What directory do those raster images fall into? Right-click, let's go to Options, I'm going to go over to files and you will see there is a new directory right here, PDF import image location. So you can control where the raster images end up. OK, we're good.

Did I leave anything out of there? I don't think so. I think we're good. All right and what time is it, 1:12?

OK, I'm already behind. Ya. Hello, go away. OK, back over to-- oh, I keep forgetting I got all this technology going on. I don't have to switch over to the PowerPoint. I just have to click.

This is the 2017.1. I just kind of showed that all to you. The actual command that converts the SHX over to text is PDFSHXtext. You will never remember that. Ready let's go. Try to say that. You can't say that command.

Let's take a look at some of the changes in the user interface inside of AutoCAD 2017. These are those things that you won't notice unless somebody tells you about because it's been this way for so long. So I'm going to actually just jump over. You can keep an eye on the PowerPoint. And I'm going to show these guys to you.

Simple little things, if I do a right click. I want to take a look at my Page Setup Manager. OK, we are so used to this whole cursor bar, cursor bar, cursor bar, slide, slide, slide, slide. I am so lazy. I am not a fan of these cursor bars, don't like them. slide bars, I don't like them.

So with AutoCAD 2017 finally, we are able to expand those dialog boxes.

AUDIENCE: Wow.

LYNN ALLEN: So that-- wow. Think how much more motivated you would have been if we had beer outside the room right before you came in. That would have been even bigger.

So isn't that a tiny little thing? And then now that I've expanded it, it will stay this way. So all those dialogue boxes, almost all of them that have lists in them, things that you might have added into the dialog box, now you can expand them so you don't have to use the dreaded slider bar. Don't like the slider bar.

OK, what else? Wow, that was exciting for you. Let's see how this one is going to go. Insert

command. So, you'll notice I picked an amazing preview to show this to you on because that's a pretty awesome block right there. But you can expand it so you get a better preview. But really the part I like the most is it now supports autocomplete.

I'm just going to type in two characters. You can see that it found the block I was after. Once again, no more of the dreaded slider bar, yuck, yuck, yuck, yuck. You can just start to type in the block that you're after. Or it's up to you, you can do it either way. What else?

Are there surveyors out there? Work with surveyors? OK, for the five of you who raised your hands, they put this in for you. It's so little but if I don't tell you, you'll never know it's there. So when it comes to the inserted content, being able to control this scale factor, they finally put in US survey feet.

Five of you are happy about that? They're a loud five, though. Wow, and the rest of you are like, I don't care but I'm going to clap. Thank you, appreciate the support.

Have you ever done this? You ever selected texts-- Excuse me not texts, selected objects and then hit the Delete key only to find nothing happens? The reason nothing happens is because you have turned pick first off. I'm behind.

What you need to be like-- She's so sweet. She's like, excuse me. OK, I'm behind. All right, I'll speed it up. Thank you, Amy, thank you.

So where was I? OK, so you select objects, pick first is off. And account managers, you have your, the people that work with you ever they accidentally turn pick first off and you got to try to figure that out. When pick first is off, other things don't work. Am I right?

Other like text edit doesn't work right. You should really never turn off pick first. Some of you might disagree with me on that. OK, so now if I select objects and I hit the Delete key, it will come on and say, hey boy this would work so much better if pick first was on, would you like me to turn pick first on? Yup, yes please, yes. And then it will stay on until somebody turns it off.

Let's not do that, though. Let's see, what else have I got? Oh, this one's really important. So apparently some of you care exactly how long it takes for a Tooltip to show up on the screen. For me, I don't really think about it. Apparently some of you do.

If I move my cursor on top of that for example, it takes a second for the first Tooltip to show up

and then it takes, by default, two seconds I believe for the second, more information to show up. So guess what? You can now control that. Another example, get paid by the hour, set it to like a minute.

So here is some Tooltips. If you hate Tooltips, I'm sure you know, in the last few releases we will allow you to turn them off completely. For some reason you don't like them, the number of seconds to display right here, you can change it to five if you think that they pop up too soon. You want it to take its time, you can change it make it a higher number.

You can make it a smaller number. You can set it to zero and it would immediately show up. You also have control over the number of seconds it takes for the next, the fuller Tooltip to display. Ya, I'm behind.

What else? Oh, this one. OK, so personally, I think this should go into the way that torture your coworkers part of the presentation. And I'm not really sure who asked for this one either but I'm going to share it with you. So you'll notice I have a kind of [INAUDIBLE] crosshairs, aperture crosshairs.

There is a new command called-- I'm not sure if it's a command or system variable cursor type, cursor type. I'm going to set it to one. And now you'll notice that I get the windows cursor, which is really fun when you go into a command like erase. Anybody want that? Anybody?

Does that not look like a great way to torture your coworkers? They'll be like, wow, what happened to my crosshairs. Nobody knows about that command. When we were trained internally at Autodesk, they didn't mention it to us. So the chances of them finding out about it, very slim.

Someone just mentioned it to me. And even the product manager was like, really. I'm not making that up. I should be but I'm not. All right, keep going.

Oh, only the veterans know what just happened. I saw you were over here and back a little further. No, peach shirt, didn't you raise your hand? OK, so this is a very sophisticated part of the class. If you see a rabbit on the screen, the first person to raise your hand gets a present.

Those of you who haven't been in my class before, you didn't know that. But now you do. Very complicated, you going to be all right? OK, so what do you get, Mr. peach shirt guy? You have no enthusiasm now. You had a little more enthusiasm a second ago. He's like, maybe.

All right, so I do usually keep in the theme of *Monty Python and* the *Holy Grail* because I'm a huge fan. So for example, I have the Black Knight. Oh, OK, just a flesh wound, like see. Awesome, awesome, I know you all want it. You're so jealous you didn't raise your hand.

And then this is, of course, the rabbit with the sharp pointy teeth, the bunny with the sharp pointy teeth, right, right, right. Kids love this, especially little tiny toddlers. OK, which one would you like?

AUDIENCE: The black knight.

LYNN ALLEN: The black knight, yup. Any of you remember when John Cleese was here? It was fun. We had like at the time, it was only like 4,000 people. I'm throwing it.

AUDIENCE: [INAUDIBLE]

LYNN ALLEN: You do have the coconuts. We had 4,000 people learned how to, da dat, da, dat, da dat, anyway. There's one left. This has to be a rabbit. OK, move along. Stop talking, right.

We'll just go over.

AUDIENCE: [INAUDIBLE]

LYNN ALLEN: Yeah, I saw that. What are the odds? Let's keep going. We had a little conversation. We'll talk later.

So we've had center lines and center marks in AutoCAD for a long time, but not intelligent ones. They're not associative. So in 2017, now they're actually associated to the objects that you use to draw them, right, that you use to put them onto. And if you modify those objects they will adjust accordingly. So let's jump over quickly and let me just scoot over to-- hold on. Annotate right, center line. I'm going to draw a center line between this object here-- Let me zoom up so you guys can see better, --and this object here. Really easy to put grips on it, very friendly but the key, I think, is if I come over here and I modify one of the objects, uh-uh look it goes, ya. It knows. It's like, oh wait, I need to modify myself. Says it just like that.

Center mark, same idea, I can come up here. And I can say center mark. I can grab this circle and then incidentally center mark repeats. So you've got to pay attention. You need to make sure you get out of it. Central lines don't.

And I decide I want to move this circle over. No problem, it will adjust accordingly. And I can

also make it bigger, smaller, so on and so forth. OK. So lots and lots of system variables allow you to get exactly what you want here. I'm going to click on the center mark. I'm going to go over to Properties, and you will see that there are quite a few options.

You've got sizing gap and the various extensions. So you are sure that you can get the center mark or the center line that you are after. And then you'll also see over on the PowerPoint presentation, you will see that there is a center disassociate command in case for some reason you don't want them to have a higher IQ. You can bring it back to the way they used to be. For some reason they're begging you. Who knows why, no problem.

Am I catching up? 22 and oh, I'm all right. Only behind by one now. Graphics have improved in AutoCAD in the last few releases, right. Remember how we got so used to, whenever there was a line that was just one degree off, it wasn't orthogonal, it would have that little jagged line. And for years we thought, that's OK. We were OK with that.

So they finally got rid of that. And now it actually is not jagged if it's just one degree off, which is kind of a bummer if you wanted to be able to tell if it was one degree off. Now they all look fine. So they've been cleaning things up. Circles, no matter how far you zoom in and no matter what your variables are set to, they look great.

And a couple of other things that they've done, that line smoothing I was talking about, where it was a little jagged, jagged, jagged. It worked when it was all said and done, but during the previews it still looked jagged for a long time. Now it's all beautiful no matter what. You will also see that when you have a dotted line type, kind of used to the fact that the dotted line types always showed up the really faint, right.

It printed OK but inside of AutoCAD they looked really faint. So you're like, what's up with that, why doesn't it look the way it's going to print. So now in 2017 it looks the way it's going to print, which is nice. How about a dash dot line type, the dot always looked like a box, right. But it printed OK, once again.

Why wasn't it round? So now you'll see that they're nice and round. We'll take a look at that. And then if you have a very closely spaced parallel crosshatch pattern and you zoom out, it always didn't look right. It didn't look parallel anymore and so you're like, oh I did something wrong, and you would zoom in. And you would say, oh, it's all right.

But it was not a, what you see is what you get, correct. OK, so now, with AutoCAD 2017 it's

going to just look a lot better. But let me just show you a couple of these. And I'm going to show you this awesome system variable that you guys are all going to want to set. Set the bar high on that one.

Here I have a dotted line type, nice and dark. Doesn't look faint, like it used to. I'm going to switch this. Let's make it a different and line type. Make it a dash dot line type. Please hold.

Break the bilayer rule, get my CAD manager mad at me. You would never do that. Don't do as I do, do as I say, right. You don't want to do that normally. Let's also great this. Let's make it nice and thick. Looks pretty good and you will notice that the dots actually look like dots, which is nice.

Is that revolutionary? No but it's kind of nice. So have you ever had this happen? So I'm at the command line. I move my cursor in here. It doesn't know when you are in a gap that you are trying to select an object. Or how about if you have an object snap and you're trying to snap to the gap in an object. And it's like, I can't see it.

You're like, it's right there. I cannot see it. So now there is a system variable called LT gap selection. And if you set that to one and you happen to be in the gap, it's like, I can see you now. Come on that's great, erase, which I did. Ya.

You don't have enough gaps in your life, clearly. I thought that was a big one. Applause, you guys are awesome. All right, I don't need to show you that parallel hatching one. You guys get that one.

Design views, all right so if you ever needed to share your AutoCAD drawing file with somebody who doesn't have AutoCAD and are very little technical competency, even if you make a DWF out of it, they have to go download the viewer and that's like too much, right. So you want to share your drawing files with them. You'd also like them not to be able to mess up your drawing files. Look but don't touch.

You can zoom in, maybe that'd be all right, maybe do some basic measurements. But you don't want them to be able to mess up the original DWG file either. There is this very, very cool new feature called, design views. Easy to make, easy to share, you literally get a link to it, drop it in an email and all they have to do is click.

And I think we're all pretty good at that. My dad can do that. So I know that anybody-- I believe anybody you work with can click on the link. You can even put a big arrow in the email, click

here. So let's take a look at this. Very, very easy, so let me just jump over to right here. Let's get a little bit better picture for you.

I want to share this with somebody that I'm working on a project with. So I am going to go to the A360 tab. I have to be signed into A360. Who has A360 account? OK, good. It's free. There's no reason not to have it. And it's very safe, very secure.

But you will have an A360 account. They don't. Don't worry about it. They don't need to have any type of an A360 account. But in order to do this, you have to have the A360 account because this is going to go up in the cloud, this design view, and that's how they're going to go take a look at it no matter where they are in the world.

All right, so share, design view, very simple. So once again, if you get paid by the hour, you're going to click this first option that says, publish and display in my browser now. The other option, publish and display and let me know when it's done. See that's the one you want to pick. But because we're in this presentation look how quickly the viewer will open in the browser shortly.

Paid by the hour, you do this one, right. Or you could have just kept working and it would let you know when it was done. OK, so I also find-- Ya, it works great. I also find that when there's a lot of people watching, for some reason that feature doesn't always work, which is why I have a cake in the oven.

What does that mean? Julia Child, right, you know she's like, pulls out that magical cake. She's got it ready to go. I got it.

I usually do it anyway because it can take too long and I always jump over. Anyway, all right, sorry, ya me. I just work here. So this is what it would look like if it worked. Remember the old Julia Child, she always-- No, OK.

We're ready to go. All right so you look at this. This is actually what happened. It didn't crash. This is what I got.

Very quickly, so here I have down here, I have the three different sheets. Do not mess with me, OK. I can take a look at the different sheets. It should be faster than that. It's normally faster. You also have the different views that you might have in your drawing file that you can go to.

Here's the trick, though. This get link, that's the ticket right there. Copy that link, drop it in an email, and then they can come here, and they can check it out. Once again they don't need to have A360 or anything like that. You'll also see some other things, panning, zooming, you will find that you can do some basic measurements.

I love this live review. That allows you to have multiple people looking in the same drawing at the same time. You just need to invite them all to participate. When it works it's great. Let's move along.

Back over here, all right. So sad it did that, sorry. --you printing and whose my 3-D printers out there? Who has a 3-D printer? You can buy a 3D printer now for like the same price as an X-box on Amazon.

You're like, whatever. Let me just see those hands again. How many of you do 3D printing? Like they all sat in the front. So I'm going to do this really quickly. Even if you don't do any 3D printing-- OK, got it. Even if you don't do any 3D printing, it's fun to watch. Let's face it.

So there's two different ways you can do 3-D printing If you have a printer hooked up to your computer, you will use a 3D print command, clever. If you are sending it out to someone else to let them 3D print it, it will make an STL file for you. You can send it to someone else, to a service for example. And that is a 3D print service command, also very clever title. Very easy to do, you will see for those of you who do 3D printing, that with AutoCAD 2017 they added in this very, very cool application called, print studio.

And print studio doesn't load unless you tell it you want it to load. But it's going to help make your life a lot better when it comes to 3D printing. How many of you've ever got a 3D print right on the first time? [INAUDIBLE] usually it takes a couple of trial and error, though right? Takes a couple times to get it right, we waste a lot of material, we waste a lot of time, waste a lot of money. So this guy, print studio is going to help you get it right the first time. Still may not get it right the first time but your chances are going to go up dramatically.

So let's take a look at this. Guys all right? Good. So here is a little cabin in the woods. Look at this. There are no woods. It's just a cabin but in my head, there are woods.

And it has a lovely view of the lake. I want 3D print this. So if I go up to the big red A in the upper left hand corner of the screen, hit it once, not twice. Because bad things happen when we hit it twice. Am I right?

You will see if I go to publish, there is that send to 3D print service, well, it will make an STL file. Or if you go to print, there is a 3D print command. It's really very simple, straightforward. It's like, well what would you like to 3D print. So you highlight the objects.

Give it a second. It's going to union them together and check it out. Make sure whether it's 3D print worthy for the most part. It'll still let you make something that you can't print or select objects. Here we go. And this actually dialogue box has not changed from the past. It's pretty much the same as it was. You can zoom around in here. You can change the scale factor.

I'm going to say, OK. This is the different part. Now it's going to go into print studio. And print studio is going to help us get this awesome 3D print out the door. And right now my house is too big to fit on here. So the first thing that I want to do is I want to move it to the build surface. And then I also want to scale it.

And let's do a scale to fit. So there it is. Now if you take a look at this app, you will see at the top of the screen a variety of different things you can do. But the most important part really right there is repair. So take a look at your model. It will let you know if things aren't going to work and it's going to try to help you fix them. Try to prep the model so you have the best possibility of getting the 3D print that you want.

Since there weren't that many of you that raised your hands, I'm not going to dwell on this. And I'm a little behind. But it's a very simple program to work with. I could spend the whole hour on it. It's fascinating actually. All right, let's move along.

Oh dimensioning, this is for 2016. And I ask people when I do my presentations, how many of you are using this feature that came out in 2016. And I hardly ever get hands that go up. How many of you are using the new, one stop shop, dimensioning tool?

OK, that's good. That's actually pretty good. So the rest of you are like, do you know what I'm talking about or you just didn't like it? Because it's awesome. So if you've used AutoCAD for a long time, you guys remember the old days, with DIM mode. You may remember the good old DIM mode days.

If you wanted to do any dimensioning, you had to go into DIM mode to do the dimensioning. In fact if you work with somebody who's used AutoCAD for a long time, it's impossible for them to hit the Escape key just once. Any of you know someone like that?

Like all look like we have DTs when we're using AutoCAD, DIM mode is partially responsible for that because it always took at least two, sometimes three escapes to get all the way out. So that's why that person probably does it. Same with grip's, back when too, right.

So this DIM mode is very, very different than the old DIM mode. Am I way behind? All right, good. It's very different than the old DIM mode. This is a super smart DIM mode. It's going to be less clicks. Your life's going to be better.

The sun will come shining up every day. Am I selling it? Nobody walks into the office and says, oh, ya, I get to dimension today. Said by no one ever, am I right?

OK, so let's make it a little bit friendlier. So I need to do some dimensioning in here. I'm going to go to annotate. This is the new one stop shop, right there. This beautiful dimension tool. You can still use these guys but you got to tell them what you're doing.

This is the psychic dimension tool. It knows what you're going to do. Also, aside from that, I do want to point out that you have the ability now to save a default layer for your dimensions. So you don't-- Yeah, no kidding, right. All of the lazy people love that feature.

That would be me because I don't want to have to keep going back and changing my current layer, right. What a drag. That's a drag. I wanted to know if I had it my way, there would be one of those types of layers for every type of object inside of AutoCAD. That I could set it all up and whenever I went to that particular command, it would just know and automatically move to that layer. How awesome would that be?

No? Any AutoCAD team out here? No, they're not raising their hands now either. There's usually a couple hanging out. There's also a DIM layer command for those of you who write script files. DIM layer, and it doesn't care whether the layer exists. I type in, Fred. It will make a new layer, use the default settings. And now all my dimensions are going to go on that layer.

You're in AutoCAD 2016, the dimensions will not go on that layer unless you use the cool new one stop shop tool. AutoCAD 2017, it doesn't matter how you get your dimensions on there, it will use this layer. All right, so I highly suggest you set this layer. Let's use the new one stop shop-- Look it's like a little sun, right there.

You see a little sun? It's so happy. It's like going to make your day bright and shiny tool. I don't know what that really is, there. I'm in the DIM command. Super easy, let me just zoom in on here. I would like to-- is my on or is it off, so I turn it off, right now. I want to dimension this

layer, right here. I'm going to just pick it, move it out, pick this guy, move it out, pick this guy, move it out. It's magic.

Pick here, move it out. Now it's grabbing end points. If for some reason you don't want to do the endpoints, you want a dimension in between two things, no problem. You just have to pick an extra point, all right. Well, now I need to do an angular dimension. I don't want to have to change.

I'm just going to click two objects that are not parallel and it's like, oh, you want to do angular now. See how that happened like that? I want to do that one or that one, very easy. I also need to do a radius or diameter. Let's grab this spiral staircase and let's put that-- We'll do diameter, we'll do radius. What if it's doing diameter and I want it to be radius? No problem, just simply switch it to the one that you don't have.

There are a lot of great options down there to help you get exactly what you want. But so far I'm basically just picking and clicking, very, very easy. All right, you sold? Come on. Otherwise you got to go click, click, click, click, click, click, click, click. I'm over it.

Let me go ahead and select the object right here. We turn my dimension that [INAUDIBLE] back on. OK see? I accidentally placed it right on top of an existing dimension, which normally AutoCAD could care less about. But the new one stop shop tool says, hey, you're drafting teacher is really upset right now. And what would you like to do? Let's try, move away.

And you will see that it moves the existing dimension away, the one you just placed wins, all right. Let's do this again. Pick this guy here. Oh, uh,uh wrong one. So OK, break up, breaking up because normally breaking up is hard to do.

That was painful, wasn't it? So you'll notice that-- OK I don't have the right dimension style but you'll notice that it broke it up and made it continued dimension, right. Still using just the same old command. No, nothing? I get nothing, all right.

Those of you who used DIM mode before, if I hit an enter now, I'm in this world of DIM. I hit an extra enter to get out or an escape to get out. If I do an undo right now, what will happen? All my dimensions are gone. You will all do that at least once, I promise. And You're all like, what just happened.

That's because it's like one big command. All right, so you want to undo while you're still in

DIM mode. If you made a mistake on the last one or you can just erase the last one when you get out or whatever. Just a heads up for you on that. That is why God created redo. So it's OK.

Now what else? Here is a big AUGI wish list request and one of those things that if somebody doesn't show you, you won't know. 2016 once again, I double click on this text. I want to-- the AUGI wish list. AUGI members? AUGI members? Awesome.

How much does it cost to belong to AUGI? Nothing, it's free. Every year they put out a wish list, they hand it over to Autodesk and we do what we can to try to get those wishes into the product. This was the wish list request, this slider bar. So that you have the ability to control the width of the text, which if someone doesn't tell you, you probably wouldn't notice it. That was one of the wish list requests.

--is going to the AUGI meeting tonight? There's an AUGI meeting tonight. You should go. It's kind of fun. I don't have to keep going over to the PowerPoint. That's it, smart dimensioning.

OK, this is for the lazy. That's me, lazy layer tips. So first off, for any layer, I don't want to have to keep-- to switch my current layer, I don't like having to go to Home in order to switch my current layer. So I strongly suggest that you go to that drop down layer list, right. Do a right click and say Add to the Quick Access toolbar so it's always on the screen. You can get to it very easily at any point in time.

Tiny little thing, all of you can do this. Has been in there for a long time, unless you're on are really, really old release of AutoCAD. And I highly suggest you put any commands you use all the time, and you're tired of having to go to that place on the ribbon, put it on the Quick Access toolbar. You saw how easy it was. Any command, right click, add to the quick access tool bar, easy, easy, easy, easy, right.

So I already showed you about how to set your default dimension layer. But you can also do that with hatching. Do you guys know that? Because it's kind of hiding in there. So if I go into the hatch command and you drop down properties, you will see the same thing we just saw with dimensioning. We have the ability to set a default hatch layer. So that when you go to hatch, you don't have to change your current layer, all right.

It's been in there for many, many releases. So even if you're not up to date, you will be just fine. Let's go back up to Pow-- What am I doing? I'm spoiled. OK, because you know what I'm talking about. Normally I would do a presentation and I don't have all these great AV people

that got it all set up. I have to do the alt-tab all the time to go back over to the other. Is there a rabbit?

AUDIENCE: Ya,there's a rabbit.

LYNN ALLEN: Are you sure? All right here we go. No, that's not a rabbit. My dog.

AUDIENCE: [INAUDIBLE]

LYNN ALLEN: I should-- my dog, Tiffany. Anyway, she never looks like that just so you know. She looked like that one time, got a picture. That's it right there. So, when you install AutoCAD it asks you if you want to migrate your custom settings. Some of you get to that page and your like, ya, I'll worry about that later. I'm going to help you worry about that later. Or for example, you downloaded or you selected a few of the custom settings and you're like, oh, I need to migrate some additional ones. We spend time customizing AutoCAD and personalizing our settings. We don't want to have to do it again. What kind of settings? For example, profiles, right, everything that you save inside of options, or maybe the CUI, or maybe custom line types, or custom hatch patterns.

We could have made a whole bunch of great customizations, and we want to be able to take them with us. There's a whole bunch of different problems that you could run into, changing computers, old computers. So let's just kind of go through the different scenarios, all right. So first off, if you did bypass it, how do you get to it now? Very, very simple, you go to-- You know what I'm talking about, this migrating custom settings right? Right?

Hit the Start menu. You guys all know this right? And you're going to go to All Programs, whatever version of Windows you have, there's a couple of different ways to do that. We're going to go to Autodesk. And we're going to go to the release of AutoCAD that you want to migrate the settings to. And there you find the migrate custom settings option.

You would want to say, migrate from a previous release, right. If I AutoCAD is open, it will call you names, and you won't be able to do it. So you have to have AutoCAD closed. So if you look over at the PowerPoint, if you're on AutoCAD 2016 or before, you get the state of the art dialog box on the left. No, nothing?

On the right is what you get in 2017. So the dialog box looks really nice inside AutoCAD 2017, a little easier to figure out. It's very, very clear what you've already migrated and so on and so forth. So that's pretty easy to do. If you happen to be upgrading on a computer where you had

the previous release of AutoCAD and you've just now upgraded to, let's just say the most recent release of the software, that's not too complicated. What if everything goes terribly badly?

That's never happened right? If everything goes terribly badly, once again, start all programs, Autodesk, AutoCAD 2017. You will see this option reset settings to default. So if you migrate stuff and for some reason you wish you hadn't, you can always put it back, all right. You CAD managers, I'm sure are pros at this.

So that's not revolutionary. But if we continue to look at some other examples of where you might run into some issues, because it could possibly happen. Let's say you upgraded AutoCAD 2017 on one-- Oh, I'm behind. --upgraded to AutoCAD 2017 on one computer and now you have a new computer. Right?

I want to get all my settings from here to there. So that is where you're going to import your settings from one and export into the other, right. OK, once again, same deal, Start, All programs, Autodesk, whatever release of AutoCAD you're dealing with and then migrate custom settings. You can export it out and then import in. It creates a zip file right.

All right, so let's keep going. What if you're on different releases on different computers? So I can only export out and import in if it's the same release. So let's say I have my new computer with AutoCAD 2017 on it. I have my old computer as AutoCAD 2016 on it.

And I want to get my custom settings from here to there. All right, this is what you're going to do. You're going to install the trial version on the old computer for the new release's software. Then you're going to migrate. And then you're going to do that same export, import.

Does that make sense? We got it? Kind of? Because you can do that. It's legal.

All right, one more. This is the problem zone. I want to point out this amazing computer on the left. OK, so you just upgraded to a nice new shiny computer. You have pretty old release of AutoCAD on the old computer. And the computer is so old I can't download the trial version because it can't handle it. Who knows why.

But let's just say. I'm pretty sure that one would not be able to handle it. So then what are you going to do? So slightly different scenario, you're going to install the trial version of the old release's software on the new computer. Good luck finding it. But let's say it's really old,

AutoCAD 2013. You're going to have a hard time finding that.

You can Google it. You might find it. I was kind of running around trying to find it earlier. But go to your reseller. They should be able to help you get some form of that if you don't have it. You might still have it. Back in the days you might still have it.

You're going to install that on the new computer, all right. So then you go back to the old computer. You export out. Go to the new computer import in and then migrate it. OK. All right, you're like, whatever, this is boring. We don't like that part.

All right, let's go to some more fun stuff then. Who uses tool palettes? I used to always talk about tool palettes. I haven't talked about it in many years. Tool palettes are awesome because they're very easy, very low stress and can be highly customized without having to be a genius at customization. And I like that part.

So let's talk a little bit about tool palettes. So first off let's say, you want to have a tool palette that has all of your custom blocks on it. Very easy, in my situation, I'm going to go to design center. You're going to go find the directory that has your drawing file that has whatever great blocks on it that you want to put on a tool palette. And very simple, I'm just going to grab one of the sample drawings. How about Kitchens, right click. You will see an option that says, create tool palette, very simple.

Purge first so you don't get a bunch of wacky blocks that aren't really blocks. Because they'll all show up on the new tool palette. But you can see, no problem, very, very quickly, I now have all my blocks on there. We have galleries. I really don't know what the advantage is to this.

You can highly customized these very, very easily. So let me go over to a different drawing really quickly. Let's come over to up on here. Just so I have something I can drag and drop. OK, so they're easy to work with first of all. CAD managers like these because if you have people that aren't super, super, you know, they don't have a lot of experience with AutoCAD. This makes our life much easier.

Let's say I wanted to add in a microwave. It's really literally-- Now just make sure I get the viewport. --literally a drag and drop, right. Pretty simple, straightforward, I'm sure I would put it right there. Let's pretend I would put it right there. But let's look at this in more detail.

I'm going to do a right click. I'm going to go into Properties, and you will see in here that there

are some pretty cool things in here. If you customize it, you can easily change the name. For example, if you want to, you can control the scale factor in here.

I can't do that in the galleries, but I love this auxiliary scale factor, which allows you to tell it you always want it to scale it based on DIM scale or on the plot scale. That opens up a lot of doors of opportunity to you. One block that can insert many, many different scales. What else have I got on here?

So you probably don't want export it when it's brought in, but maybe you want to prompt it for a rotation angle. You'll notice it didn't ask me any questions. I could have keyed in the value to be able to scale it or rotate it. But this will now prompt me if I want to rotate it.

You can also-- And this is what I also love. You can specifically tell it if you want things to always go in a specific layer. You can come in here. And you can do exactly that. Break a lot of rules but you can do that.

So I'm going to go ahead and say OK. So now I mean nothing really that thing big here. Really was I not just in that viewport? Right? So annoying. So I can-- Did I change it?

AUDIENCE: Scale.

LYNN ALLEN: Oh, I did. Glad you guys are here. Wait a minute. I did, I thought I just left it. Sorry. Oh see but look how that works. I could spin it.

OK, let's try it again. Like, I hate this microwave now. Where? Did I have like three-- Oh there it is. OK and it will prompt me this time if I want to rotate it. I'm sure we'd put it just like that.

OK but let's run it to some more scenarios. Just go with it, would you. I'm working on someone else's drawings. This dimension actually has an override. If I do right click, you'll see there's an option to remove style overrides. So who ever dimensioned this. It has a specific dimension style. It's on a specific layer. And it's got some overrides on it. And I have to make another dimension that matches it.

Yeah, good luck with that, right. I can just take this, and I can just drag and drop him over here to my palette. And now I have the ability to create all different types of dimensions using the exact same settings as that dimension. Love that. What else? Hatch patterns, can match properties. It's more steps.

You can drag and drop these as many times as you want. And you can customize it. You can see right over here, you know, it's says, linear dimension. I can say, you know, Joe's dimension or whatever. -ension, with apparently a big O. You can change it to whatever you want.

How about hatch patterns? I'm in somebody else's drawing. I need to duplicate this exact hatch pattern. No problem, select it, drag and drop it over to the palette. You might probably want to change the name.

Let's take a look at this. What have I got going on here? Because it knows the angle, the scale factor, the spacing. It's got it all. It remembers all of that. And now I can drag and drop that anywhere I need to, and it will just fill it in.

So it's just a fast, fast way to add things, to me, to existing drawing files. And you can do other things in here. You can customize the image. You can customize that. Maybe you want it to look completely different.

Maybe for example, you want it to look like my dog again. Ya. See? You can customize it with any images that you want. You could totally jazz this whole thing up.

And then there's a couple other things you might want to do. I happen to have it set in a list view. If we take a look at the View Options, and maybe I want it just icons. You can get a whole bunch more on the screen at the same time. So you can just have a little block or dimension or hatch party.

There's a lot of things you can do with tool palettes. And it's easy to customize. And that's why I think most people like to work with them. You're out. Let's move along.

OK we got to get to the best part of the class. Ah. I saw that guy in the third row on the end. He's like, Yeah, me Yeah, do you. Do you want? OK but you have to be into it. OK. Were you here the one year? So one guy is like, I don't even know what that is. And I said, you're out. You don't get it. Sit down.

Very good, all right, so where are we? Let's move along to, ways to abuse your coworker, the most fun part of the class. See, that's the only reason you guys come. I know it. All right, so these are just for fun.

Don't do it to a coworker that's got a bad heart or anything like that. Control 9 turns off the

command line. It does let you know it's going to turn it off. Oh, yeah, yeah, yeah, I want to turn it off.

You should turn off dynamic input as well. Because in this situation if I go into a command, it will show up there. So you want to turn off dynamic input as well, because you don't want them to see anything. So have a good time with that. You have no idea what's going on or what you're setting text type to or anything like that.

OK that's control 9, that's easy. And it's the same deal to bring it back, like this. What? Oh, I'm in a command. I'm in a command. I get it. OK, I'm like, wait a minute. You have no idea how many times I like mess these up, and then I do another presentation. And I get my own self in trouble.

A zoom factor is fun. So that controls how fast the zoom is when you're zooming in or zooming out, right. So usually you have a set to like 60 or something like that, 30, OK. So you can set it all the way up to 100, just depends how fast you want to zoom. I recommend you set it to three.

So now you watch me zoom. That's fun. Let's put that back. What did I have it set to? 30, right?

Or how about reversing the zoom wheel? So, we're used to when we push it forward, it zooms in, and zooms out. Where's the fun in that? Zoom wheel, if you set it to one, now it does the exact opposite. So now when I push it, it goes away.

That will drive someone crazy. That's because of inventor, right. Any inventor users in here? Inventor zoom is the complete opposite and we wanted to be able to match it up. Annoying is what it is. So. Let's go back into that. Get that back to zero.

What else? Pick box, oh that's fun. Did I put it back? I did,OK. Pick box, I'm having a good time. Pick box, here we go. OK so that's of course the size of the pick box. It's complicated, like if you go into selecting objects. Well you can set it to zero. That's good fun.

Now let's go on the erase command. Or you can, even better, you can set it to 50. Now let's go in the erase command. Oh, did I set it? Pick box, I did, erase. It's what is happening right now?

I'm in the way. Why isn't it show-- It should be like huge.

AUDIENCE: Try model space.

LYNN ALLEN: I was a model space. All right, let's go back. Well, let's go over here. For sure, right? Now let's go erase. What is happening right now? Pick box, everybody see it's set really big, right? What did I say, 0 to 50, Erase. All right, forget that one.

It works. I just did it before I came in here. I know zero is funny. It still thinks it's zero. I hope I can fix that before my next presentation. FILEDIA, you know sometimes FILEDIA gets turned off by accident. Let's set that to off. Controls whether or not you get the dialog box. Lower right hand corner, you'll see let me know I changed a system variable.

That's the command SYSVARMONITOR came out inside of AutoCAD 2016. You can set it up to let you know when system variables get changed behind your back basically. So what's happening right now? Let's go into the Open dialog box. And you will see that is actually asking you to type in the path.

You guys remember how to that, right? C:/, this is fun because nobody knows how to do that anymore. Maybe a few DOS people out there might remember how to do that. So if you got to save it's going to ask you exactly to specify the exact directory type in where you want it to go. So FILEDIA, let's make sure we put that back.

Am I the only one who is freezing cold in here? Is it cold? Oh my God, it's so cold. All right, what else? Oh, MT JIG string, you guys know what that is. If I go into a text, [INAUDIBLE]. OK where was the last place I was at? Yeah, I was in Atlanta.

I actually don't think I ever was in Atlanta. But for some reason I was rooting for the Braves at the time. I guess I don't know what was going on. Anyways, so you have the ability to control the sample text string when you go into MText, right. That's controlled by MT JIG string. Stop it. Aw, shut up!

You know, that's funny. It's based on pixels. It's not based on a size, so it should've showed up. I don't get it. MT JIG Sting. Whatever, we will put Autodesk. I think it's like 10 characters or something. So now if I go into text. You can put whatever you want. Do it on your bosses. Say, I need a raise or something like that.

OK What else we got? We got a mode macro. So this basically puts text on the bottom of the screen. That pick box is hysterical. So I can put, I'm watching you. Can you see that right over

here? I'm watching you right next to model space. You see that? It's funny.

I know where you live, hit mode macro. Undefine, undefined is really fun. If you've been in my class before, this is always the-- I love Undefine. So undefined allows you to Undefine commands inside of AutoCAD. For example, I do not need the line command. Let's get rid of it.

Now if I try to type in O, you will see-- Oh, why is that? I didn't type in the whole thing, sorry. I got so excited, I didn't do it all. Type in the whole thing. Because an alias is not a command name.

Now if I go line command, you will see that it doesn't even find it, right. I type in L, I look at the list, there's no line command on there at all. If I come up here and I click on line, you will see that it says, unknown command.

Undefine other commands like, Save. I don't need that. QSAVE, you got to do them all. QSAVE, Save All, you got to do them all. Undefine them all. Yeah, how do you put it back?

There is a Redefine. Fine. Do not Undefine the Redefine command. You're all going. So if I put line back, now if I type in an L, you'll see it finds a line command. If I go up-- OK, it's all right. OK?

And then last but not least, any LISPers out there? Two of you, all right. Lost in stupid parentheses, right. So this is all in the handout. There's a handout posted. The handout posted covers everything that's not in your booklet. And so this is all in there.

So there's a LISP function called, alert. And you can see it on the PowerPoint. I can put formatting hard drive, please wait. So it just makes a little dialog box on the fly. So the trick is, whatever you want it to say in the dialogue box has to go in two quotes. And as soon as you have an open paren-- I'm like loosing my mind here. --an open paren, you are now talking to LISP. You're no longer talking to AutoCAD.

And I'm talking to it using a LISP function. Open paren alert, formatting the hard drive, please wait. What do I need? Close paren, they need to all even out, and this is what you get. And you'll notice, there's no cancel on there. Now this would be kind of a fun thing, I think, to put-- so you can go into to CUI for example, and you can put codes like this, for maybe, for example the erase command. And you could do that in the menu, so when they click on erase, it automatically says, formatting the hard drive. That's funny.

I think that was it, right. That was all of them. Easy to do, once again, it's not going to cause any harm. It's not going to hurt anything unless, you know, the guy has a bad heart. So be careful who you're doing it to. So here we go, finishing it up. You all got the tips and tricks booklets. There are few extras I believe. When you're leaving, they make awesome Christmas presents, make sure you get one of those.

You also can go to Autodesk.com/AutoCADtips if you want to download the PDF. And that's it. That's my email address if you have more questions. Big thank you to Amy for keeping me on task. And if you have no life, like me, feel free to follow me on Twitter. Have a good rest of the day.