DARREN YOUNG: Afternoon, everybody. I'm Darren Young with Southland Industries. Right here in the middle, we've got Greg Murphy from Murphy Company. Owns the whole place. It's his, man.

GREG MURPHY: See, it's on my shirt.

DARREN YOUNG: And then we got Jubel Beren. Last year, Jubel and I did this class. There were two of us. We're going to try three. Two Stooges just doesn't work. So we figured we'd get three of us up here.

So, just a little precursor. 60 tips, 60 minutes. Whoever was in the class last year that thought we should have taken questions.

JUBEL BEREN: That doesn't make sense.

DARREN YOUNG: There's not a lot for Q&A. You've got my email on the handouts. We've got business cards down there. Just email us anytime. See us after class. Throughout the year, just say, hey, I was in your class. Got to follow up. We'll be happy to answer questions and track it down.

But 60 tips in 60 minutes-- we're going to try to hit it again. Like I said, so we won't really have time for any questions throughout the class.

JUBEL BEREN: For you guys standing in the back, there's plenty of seats up front, here. If you'd like to--

DARREN YOUNG: You don't have to throw--

JUBEL BEREN: --take a seat.

DARREN YOUNG: --as far to hit us.

JUBEL BEREN: And then when you throw stuff at us, you can actually hit us.

DARREN YOUNG: Are we ready to go? I don't want us to go when we've got one minute. I don't want to cheat.

JUBEL BEREN: There's still people walking in. So we'll give it a second.

GREG MURPHY: I got some short ones. I'll make up some time.

DARREN YOUNG: All right. Let me set my alarm here.

GREG MURPHY: Look at you. There we go. He's alarmed it. There we go.

DARREN YOUNG: Let's close out of this guy. Am I showing? Yeah. I'm showing up here. All right. Tip number one. I don't know how many people use deployments to deploy their software. Bigger companies typically do. You don't have to go through the install wizard.

2016 fabrication products had some errors in the install where you couldn't build deployments properly. If you look at the knowledge base, they actually have articles on it and how to fix that.

But essentially, if you look in this tip here, you've got to replace some files. So this is what an install folder would look like on your DVD or something. You'd have to copy that out. The setupINI file is what controls all the setup code.

And essentially what you're going to do is you're going to look for the section here that says extra files and replace that whole section with these items in this setupINI. The best thing to do, though, is just copy and paste that, so you got an original. But you've got different text between the three products. So if you make that change in the setupINI, you'll be able to build deployments.

And that's my tip. I'm probably over. We'll go to you, Greg.

GREG MURPHY: All right. So this is an estimating cam tip. So when we were in estimating and we have some CAD light functions that we can do in here, this little question mark up here lists all the commands that you can do within the estimating program. So if we click that, we can see what the abbreviations are in here.

So what I usually do is I print these out, put them on the side of my screen until I find the top 10 that I like to use. It's about the majority of the ones you'll use.

A couple I'll highlight here is Node Stretch, which is really nice if you've got multiple nodes within a design line. It allows you to just pick those nodes, and then you could move that whole set of design line. Or you can double click this line, or you can type in the abbreviation.

JUBEL BEREN: OK, I want to add to that a little bit. This is also available in the CAD software.

DARREN YOUNG: By the way, if I screw up the video, switching between us, feel free to holler.

JUBEL BEREN: I just wanted to add to that. It's also inside of CADmep. Same things he was talking about, it's under the Fab Viewer.

I'm going to continue on to that, onto the next one. You can now utilize the new API for complex or simple automation. Great for working with all your objects simultaneously or pushing data between fabrication and external data sources, such as Viewpoint and various other softwares.

Sources that your enterprise can use. For detailed information on this API, visit the Class Fabrication API at 1:30 PM on Thursday. Tim Catalano will be teaching that class.

DARREN YOUNG: You don't wanna write something up right here in front of us? Pull from the cloud and draw everything out?

JUBEL BEREN: No.

DARREN YOUNG: OK. All right. Here's my tip number four. CAMducts. Probably don't have a lot of seats of it, but it's got some pretty cool features. Control-Shift-C and I've got like a little command prompt.

JUBEL BEREN: You're not supposed to show them that.

DARREN YOUNG: [INAUDIBLE] big secret. If we type MAKEPAT-- is it one T or two? One T-- and then ALL. This doesn't work in EST. This is making one of every CID and putting in an MAJ file for me.

JUBEL BEREN: You only have a minute for this.

DARREN YOUNG: I don't have a minute for this. At times it'll look like it's locked up and it'll still work. Some versions and some service packs may have errors.

I should've showed you something. Turn on Auto Oversize. Or if you run into a fitting like this-- like I just did, I forgot-- I'm going to have to hit Apply. I should've went into the database first and turned on Auto Oversize. Then it wouldn't do that.

How is this useful? You guys have seen the fabrication being bolted into Revit. Not every CID is supported. If I have an MAJ with one of every CID, I could try bringing it into Revit, and that would help me identify which CIDs are supported with this. It's just one example of how I could do that.

I also use it when I upgrade. When 2017 comes out, I'll do this again and see which new CIDs show up.

JUBEL BEREN: Is anybody having a seizure right now? OK.

DARREN YOUNG: All right. Greg?

GREG MURPHY: So we have layer states that we can utilize within estimating. So these are the layers that come out of the services that we share between the integrated products here.

But in estimating, we have filters on and off, or if we use this button up here-- this is your Multi Filter tool that we can filter through on these. So say I want to turn off the insulation-- or in this case, my layer is called Wrap-- so if I filter for Wrap, it will then isolate all of them. And then I can check them all and then turn them all off at one time.

So you can do that with any kind of filter. So now you can get the view you want to print out. How's that?

JUBEL BEREN: OK. Short and sweet. Again-- switch me over.

DARREN YOUNG: I think I did.

GREG MURPHY: Are you going to mine again?

JUBEL BEREN: Yes. I'm going to add to his again. It's also in the CAD software, under Fab Viewer, and it's located right here. I've only got one layer in here right now, but you can do it in here also. Sorry, Greg.

GREG MURPHY: No worries. That-a-way.

JUBEL BEREN: I don't know if you guys have noticed or not, but there is a cool new feature under the Edit Service Database. It is this little guy right here. It's Manage. So what's good about this is before you had to go to each one of these servers and individually delete them. Now you can actually delete the whole group. C-Way. Yes.

GREG MURPHY: I have one to add to yours.

JUBEL BEREN: Oh, shit.

GREG MURPHY: Switch me back. Oh, come on. So this is one of the tips I added to our website that we can add to. Multiple times, you used to be able to go in here and edit these one at a time. You can now Multi Select, because my layer tag one is the same for every one of them. I can now Shift-Right-Click, do an edit. And now I can change all of those at one time, without having to do

them one at a time.

JUBEL BEREN: Show off.

DARREN YOUNG: We're out of sync now. I'm completely lost.

GREG MURPHY: You're five.

DARREN YOUNG: Is it my turn?

JUBEL BEREN: You're five.

DARREN YOUNG: All right, what am I talking about here? I don't know. I don't remember.

JUBEL BEREN: Which one are we on?

GREG MURPHY: I don't know.

DARREN YOUNG: We're on number seven. I'm on seven. I don't know about you guys.

JUBEL BEREN: That's what I though.

DARREN YOUNG: You'll notice if you make any content, you've got some left extension, right extension. These happen to be locked out. A lot of times it's zero. We'll have zero values in there. And when it's set to Auto, it actually pulls from the extension column in your connectors.

So if that's a zero value, when I've had zero values in there, I've had some times where certain sizes will throw up dimension errors, or I go to add insulation and Dimension Error comes on, even though it's set to zero. Sometimes I've had better luck going into the database and going to the connector-- let me see if I could find a connector here quick. Why does it go to rectangular all the time?

JUBEL BEREN: Because it's Duct. That's all that matters.

DARREN YOUNG: I have permissions. Show it to me anyway.

When that is set to Auto, it gets its value from here. And even though that might still be zero, lot of times it'll work. So a lot of times you can set that extension to Auto on the ITM, and then put zero in the extension here. And then you won't get those dimension errors sometimes. I don't know why. It just happens to work sometimes.

GREG MURPHY: OK. Looks like we're on tip number eight. We're looking at viewer settings. So in drawing with Designline, we have different ways we can view and make changes to that.

This is our Viewer Settings button over here. So in here we have multiple tabs. So in here we can set the Polar Snap Angle, which is where this is controlled down here at the bottom. When you set it to this, you then get those additional angles.

Also, when you go to the Options tab, a lot of times when this comes out of box, your nodes are really big. You can actually control the node size by changing the factor here. And you can change the annotation size so that you can read that as well.

Then we'll talk about this symbol draw size as well. You'll have to play with that and decide if you want that bigger or smaller. This is a symbol that you can apply to a button when you're dropping items in Designline, which we'll look at here in a minute.

DARREN YOUNG: Wow. We're right on time.

JUBEL BEREN: OK. To add to Greg's again, this is also available in CAD under the Fab Viewer. And it's located right here. Same thing.

GREG MURPHY: Why are you just repeating me?

JUBEL BEREN: I'm not repeating. I'm adding.

Another cool thing we can do in services. I'm on a waste no hub service here. And most of these items are set to an angle tolerance of three-- in my database, that seems to work out great-- this is your angle tolerance. What you can do now is, if for whatever reason, you don't need it to slope in this system, you can actually ignore all the fitting angle tolerances in that whole service all at once. Instead of going back and setting one and not setting the other, you can turn them off at once. And that is located here. I am good.

DARREN YOUNG: To carry on the theme I did on my last tip, we've got some CIDs and content, that when you turn on insulation, it causes issues. You have a hard time turning it on. We found one of the ways to work around is I can select multiple items, go to CADmep properties and turn on Insulation from the Multi Item properties to get that insulation to show up.

You might get an error message, but you can click OK, and it'll end up putting the insulation on anyway. So if you've got some old, problematic content, that's one way around it.

If you don't see that insulation in there, you can actually go into the database and-- is it Take Off Multi Item properties? You can configure which properties show up in Multiple Item properties. And insulation may not be there by default.

I think I am done. Greg, you want to do the first half, and then Jubel will correct everybody?

GREG MURPHY: That's pretty much the routine now.

JUBEL BEREN: I was going to create you on something, but that's OK. I'll shut up.

GREG MURPHY: Oh. He get one on you. Sorry.

OK, so when we're drawing in Designline again-- you can see the theme here-- we've got some viewers settings that we control. So when we do a hover over this pipe, you can see the types of items we can see in the hover.

So we can control that through View Settings when Designline is turned on. We go down to View Settings. These Show/Hide buttons actually allow us to turn on and show or hide what we want to see. So we can just toggle those on and off.

There's also one for nodes. Typically, the two are always on. So there you go.

JUBEL BEREN: You want to mention that's in CAD?

GREG MURPHY: Hey, why don't you show that in CAD? I bet that's in there.

JUBEL BEREN: Yeah, it is.

GREG MURPHY: All right. So there we go.

JUBEL BEREN: I'm going to add to Darren's.

DARREN YOUNG: No.

JUBEL BEREN: I don't know if you guys have known this or not, but Insulation Spec is now in Multiple Item properties as well. I just thought I'd throw that out there. I didn't even think about it.

DARREN YOUNG: That's an excellent one. Why didn't you tell me that?

JUBEL BEREN: Well, we used to script it, but he's got it in here now. And now we can set it to not set.

All right, I'll do mine now.

GREG MURPHY: That was an extra bonus.

DARREN YOUNG: We should just leave.

GREG MURPHY: I know. We should.

JUBEL BEREN: Come on. All right. Status blocks. You can assign blocks to stuff that you've maybe sent to your shop or sent to spooling to get manufactured. You can set up a block to identify, visually, on each piece that's been downloaded or the status has changed.

I'm going to do a B edit. I'm going to take some time here, real quick. Sorry about that.

I have already made the block in here for you. It's called an Issued Block. When we send our duct to the fabrication shop, we assign it an Issued status. And then this block appears on each piece.

So I'm just going to go ahead and change the status to Issued. As you can see, there's nothing here on this block.

DARREN YOUNG: Wrap it up. Wrap it up. Come on.

JUBEL BEREN: Hold on. Do a Create Cam real quick. OK, Save. Whoops. [INAUDIBLE] OK.

DARREN YOUNG: Three, two.

JUBEL BEREN: Shut up. Hold on, something's wrong here. All right. I'll change the status manually, I guess. It isn't set up for that.

I'm going to change it Issued in the status. I guess I didn't have to do a regen, but there's a block identifying that it's been sent to the shop.

DARREN YOUNG: Very cool.

JUBEL BEREN: Very cool.

DARREN YOUNG: I don't know how many people do COD scripting. It can be problematic and you can run into some things. What I'm going to show you here actually was fixed in a service pack after I reported it. But unless you're on that service pack or maybe an older version, you might run into that.

There's a Pro Press elbow, and they got a dot in the model number. And we were writing a script, writing that property, and I could set the item file name this way, and that works fine.

When I did this, the dot one got stripped off. Because it's looking for a dot and thinks it's a file extension. So a couple ways around that-- I can specify the ITM, which isn't required. But you can, and it knows what to do, and then it finds it. It's like it works from the back, finds that first dot, and assumes it's the extension.

The other way to do it is use this built-in ASCII code. ASCII character code 46 is the dot. That's another way to keep it working, so it doesn't strip off the one.

Again, this was fixed in a service pack. But it's still a good example, because you run into these types of things when you code. And you can use these different types of tricks to achieve the same result when you run into a defect or a bug in a particular way.

GREG MURPHY: Oh, that means it's me, huh? OK. See, I was testing.

So next tip here is showing the different colors that we can look at or view this model. So if we've spooled an area or we want to combine an area that we want to see what's left, we can go over here to Color Bio. We can change the different statuses or view the MAJ here in a different format.

So if I want to look at Status-- so in this case, you can see I have 30% of this job is not spooled and 63% is. So I can keep toggling through those. And if I had a section assigned, I would actually be able to see everything in color coded by section broken out for each one of these. So I have Material, Takeoff, My Spool-- which is very handy to do-- Vertices. And then you can go by job color, if you have it assigned that way.

So just nice little handy way to view it. If you're just looking with a project manager, you could say, here's what's spooling.

DARREN YOUNG: Jubes, you're up.

JUBEL BEREN: All righty.

GREG MURPHY: That one's not in CAD?

JUBEL BEREN: It is in CAD. CSV export is a great way to transfer data to other platforms, such as Viewpoint,

in our case, CSV Export, you'll select your objects. I've already created one, because I've only got a minute to do this.

And I could skip the report setup, but I want to show you what is available in the Print Objects. Everything that's available on the left can be shown in the CSV file on the right. So you can add or subtract from it.

To add or subtract, you just go in your Insulation, Item Insulation. Just shoot that over. If you don't want it in there, shoot it back.

Next, I'm going to go in here. Then you have to specify your order, which I did not do. And it's a good thing to merge these together. Oops. Two, three.

We found that the Sort Priority is very high in importance on doing these. You can do calculation filters just like any other reports. Next.

And then I can browse and save this report somewhere. We usually send it off in an email. How can do that in here? I'm just going to save it to my desktop here and then Finish.

And those of you that know me very well have never seen my desktop like this ever. So then this can be imported into various different softwares, like I said earlier in a CSV format. Good.

DARREN YOUNG: All right, I don't know many people-- is everyone familiar with the Path Repair tool on Services? If you want to rename an ITM, it breaks all your services templates. So most people know about that.

That same mapping file can be used with a command called VIPS, or Validate Item Paths, and it fixes the paths of the items in your drawing. So people know that. I've covered that last year in one of my sessions.

What it doesn't do is, if you rename the ITM, it doesn't change the description. That description, by default, is what the ITM name is. So if you want them fixed, there's a quick little way to do that.

I do a button report, export that thing out. Now I've already done that. I can come to Excel at this point, Open, Computer, Browse, it's on my desktop. That's going to be-- man, my eyes are not working today-- Text Files.

JUBEL BEREN: Do you need a beer?

DARREN YOUNG: Yeah. Test Darren. Here we go.

So here's my button report. I'm just going to highlight everything, spread it out. Here's the description. Here's the ITM name. Now it's in the class materials.

I have an Excel formula. Don't try to retype it. Just copy and paste it. Trust me. It's not worth it. And I could paste that whole thing in here.

And what it does, it pulls out of this thing the ITM name. Now you'll see in the formula-- it's got ITM in upper case. It's not stripping that out, because it's in lowercase.

So one of things I could do here I can now select everything, Control-F, and I'm going to replace all the lowercase ITMs, dot ITM, with dot ITM, dot ITM. I'm going to make them all uppercase. Replace All.

So what that does, now that ITM is out of there. But this is a description based on the name. Save this file and go back into AutoCAD or CADmep and you can do a right click, Button Report, and import that. And it'll actually update the button descriptions to default back to the ITM file name.

JUBEL BEREN: What's funny is it took you 15 minutes to do that one yesterday.

DARREN YOUNG: I had 40 people trying to type--

GREG MURPHY: Oh, OK.

JUBEL BEREN: Oh, don't forget to mention--

GREG MURPHY: Huh? Yeah. OK, this one is for EST and CAM, not in CAD. Out of the box, typically you'll see this Workspace tool over to the right. Most everybody probably turns it off, because they may not know how to use that. So board's in your way, because it does take up some real estate. Under Tools, we have Workspace.

So this over here allows us to have three additional tabs that we can do things with. So instead of actually inserting a drawing directly into our drawing, which makes the file size even larger, we can actually e-link it or electronically link that into our background and do the take off on that as well.

We also have filters. So we have basic filters. So if you want to filter for just a service, we can

come down and just pick a service name, and it'll filter for that. Once we have that filter, we can just pick it. And of course, I did that one wrong.

So now here's another one. So the Tab is a selection set. So I can window the selection set, do a new one, give it a name, and I can call it Area One, whatever I want to call it.

And now, I can come over here, right click, and then I can isolate for it and can have just those. So we can filter through the data that we've done takeoff with. Or in the MAJ, for that matter. Done.

JUBEL BEREN: Well, I don't know how this happened, but I found it in CAD. You can do the same thing here, as far as the workspace and stuff.

GREG MURPHY: There you go.

JUBEL BEREN: I just found it.

GREG MURPHY: It's estimating in CAD. What do you need this for?

JUBEL BEREN: Oh, just don't need it. All right. Anyway.

I don't know if you guys have known this command was out here. It's called Show Me the Diffs. This is kind of cool. Sometimes when you renumber, you can see I have two identical joints of duct, and they didn't number the same for some weird reason. You want to figure out why they didn't name the same.

You can go Show Me the Diffs. You're going to select the source, select Why This One's Not Here. And it tells me, right here, what's different. The notes are different.

So then when I go do my Renumber command-- Renumber-- I can do my Ignore Fields, and I can Ignore the Notes if I wanted to.

That's mine. Thanks.

DARREN YOUNG: Because they're going too long, beating up each other, I'm going to just show something quick.

Add Report. I don't know. I'm surprised how many people I see don't do this. You could type in different values in the setup box in your report. And it acts like a filter.

But I constantly see people scrolling and scrolling, looking for the field. So if you have an idea what it is, just type it in, it'll filter the list, and you can quickly get to the things you're doing for your report. Anyway, that's my cheesy tip.

JUBEL BEREN: Cheesy tip? Now you're getting corny on me.

DARREN YOUNG: Can you do that in CAD, Jube?

JUBEL BEREN: Yup.

DARREN YOUNG: Oh, wait, that was in CAD.

GREG MURPHY: Wait a minute. Why aren't you picking on him?

JUBEL BEREN: Because it was in CAD.

GREG MURPHY: We're going to look at this little button over here. So it's a Takeoff Area. Just sometimes you might want to see how much that area is in square feet, if you need to do some pricing by square feet. So you just pick the button. You just pick your little window around where you want to go.

When you get to the very end-- of course, I'm not being real perfect on my lines here-- just hit C for Close. I missed it. C.

DARREN YOUNG: Why you're an estimator, not a detailer?

GREG MURPHY: Maybe.

JUBEL BEREN: That should have worked. I'm not sure why it didn't.

GREG MURPHY: I don't either. See? See? So anyway, there's my area.

So now I can go back to my item list-- the very last item I just took off there-- and go on down. It's not in there. Where'd I go? So we're going to go do this. We're going to say, go to the item. Find it. So we're going to cheat. So there's my square feet-- 9,723. Tip number 20.

JUBEL BEREN: That was a good one, Greg.

GREG MURPHY: You like that?

JUBEL BEREN: I liked that one a lot. I'm not even going to say nothing.

DARREN YOUNG: Ah, makes me nervous. You're going to beat me up now. That's why I added it, to take the pressure off.

JUBEL BEREN: OK, I got a cheesy one.

GREG MURPHY: That was mine.

JUBEL BEREN: That was a good one. It's cheesy. I'm sure you guys have used this new Select Filter command. It's a button also. It's a quick and easy way to filter stuff out of your drawing when you get thousands of pieces in there. And you need to change maybe something on this grid around. You can right click on the Select Filter. I forgot to get some water, Greg.

It shows that. It'll highlight just that piece. Another cool thing you can do in there. Select Filter. I'll do the duct for some reason.

That will all filter. Then I can use my deal in here. And I need to change the notes in that to KD or something. Do that quick and easy. We use it a lot for alias tagging.

Another cool thing you can do in there, is you can adjust your columns to however you want to see in here. We use a lot of custom item data fields in ours. But what's available is on the left, just like in everything else. What you want to see can be on the right.

DARREN YOUNG: All done?

JUBEL BEREN: I think so.

DARREN YOUNG: My tip is plug in your power supply. Battery's running low. Oh, great. Now my video's screwed up. While I'm working on that--

JUBEL BEREN: Let's see here. What are you doing to this?

DARREN YOUNG: Am I back on there?

GREG MURPHY: You were.

JUBEL BEREN: You were for a second.

DARREN YOUNG: This is going to be hard to do now. One of my tips is for bogus reports-- I'll throw you over there-- do like a CVS export. Build a report with absolutely every property in it. Sometimes it's hard to track down which print objects are reporting which type of data.

So I'll have a CVS report built. It'll have absolutely everything in there. And then I'll look at that file in Excel and kind of see which of those print objects reporting which type of data.

JUBEL BEREN: In the handout that he has, I want to add he's got a hyperlink on there. That'll help you out as well. He'd show it to you, but he can't.

GREG MURPHY: I'm up?

DARREN YOUNG: Yeah.

GREG MURPHY: So in here, we're going to show these camera views, which we can store a camera, retrieve a camera, and then we can add a camera. So why would we want to do that? So we can actually set up different areas within the drawing. So we can do an ISO mode, one, two, three, four, whatever.

So this would be my main area or default. So now if I go in here and say, this is where I need to do some work in the mechanical room, I can come back and add another camera. And don't want to copy that camera. We're going to call this one Two.

So as you go through these, we can then lock them. So there's the last state I was in. That's this view. Then I can come back and lock them or rename them.

If you have a drawing that has multiple scales on it, or you have a mechanical room or an elevation section, you can then name them whatever you want, so you can flip back and forth through the camera views.

DARREN YOUNG: Jubel?

JUBEL BEREN: Can I add to yours or no? This is also available in CAD.

DARREN YOUNG: Remember, on your reviews, if we run over, it's Jubel's fault.

GREG MURPHY: Is this an integrated system?

JUBEL BEREN: OK, I'll do a quick one. What's mine now? Oh.

DARREN YOUNG: I love you, brother.

JUBEL BEREN: I know. Love to hate me.

All right, in ducting in particular, I'm going to go into the Edit mode. By default, most of ours is set to Auto Attach. When I select my duct, pick my size, I can actually hit the Relative down here. It's already set for most of your piping ones.

Click on that. Now I can set my elevation or do whatever I need to do. That's it.

DARREN YOUNG: All right, let's see if I've come back. Yes. So my tip is-- there's not a lot of people using EST for estimating. But it's a great software and it's got a lot of cool tools in it that you can't do other places.

I can go down to my item folders here. I could select one fitting or I can select multiple fittings. And if I hold Shift-right-click-- or is it Control-Shift-right-click? Take off all product sizes. And what that does is it takes off one of every select a size of every product list in all the ITMs.

So what good is this? Well, this is one way I validate content from one release to the next. In 2015, our balancing valves worked great. In 2016, it didn't like a square zero length handle on that. But if you changed it to round zero length, then it worked.

Doing this, if there's any of your CIDs or content that have dimensional errors, it'll pop up in here and stop at that item. And you can go and examine, hey, what broke in '16 on this particular piece of content? So it's one way. I go through folder by folder. I'll take one off of everything and validate that all my content works in 2016.

GREG MURPHY: I also want to add something to yours. I utilize that to validate labor, pricing, and description to make sure everything's in there.

JUBEL BEREN: Good one, Greg.

GREG MURPHY: You like that one?

JUBEL BEREN: That was a good one.

GREG MURPHY: So now we're on to adding a symbol to a button. So when you're inserting items in Designline that you can know, other than just a node, you now know, hey, there's a valve there. Or there's a [INAUDIBLE] box or something inserted in line.

So when you edit the button, there's a Symbol button over here that can display this. So when you click on the Symbol button, you go to where your database is. You go to Images, and then there's Symbols.

So Symbols can be created as a dot ITM file or DXF file. And these files will be drawn one to one. And then you want that size to be down to 64 by 64, just like--

JUBEL BEREN: Yeah, I believe it's 64 by 64, a regular button size. Pixels.

GREG MURPHY: You can make additional buttons for that-- 2D AutoCAD-- and then bring them in and now insert those, so when you drop in inline items in Designline, they'll show up. Next.

DARREN YOUNG: Ah. Jubel. There you go.

JUBEL BEREN: Oh. OK. I'm just learning so much I got stuck. Little trick that we used to keep the designers from having to try to figure out the cup depths of their PVC, when they're going to fitting to fitting. You know he's going to need a little [? put ?] piece in there.

So I'm going to draw a little bit here. I'll show you what we're doing here. So now I want to put on a 90. We made it possible so the guys don't have to calculate the [? put ?] lengths of their pipe to make those two connect to an elbow.

Here's basically our [? put ?] piece. So our little piece of pipe. Still schedule 40 pipe. But what I did was I put it at the end here, and I used-- I'm going to go to properties here-- CID 2041, which is the normal coupling. And I just called it a pipe piece.

Now my designers don't have to think about, well, how long is this pipe going to have to be when I'm going from fitting to fitting. It automatically puts it in there for them every time. That's it.

DARREN YOUNG: Did you skip a tip? You're on 30. I thought you were on 27. Skip over one?

JUBEL BEREN: I'll do 27.

DARREN YOUNG: Anyway.

JUBEL BEREN: I don't have a 27.

GREG MURPHY: He had a duplicate.

JUBEL BEREN: No, I did 27.

DARREN YOUNG: Did you? I don't know. Well, we're all behind, then. Or I am.

JUBEL BEREN: You're 31.

DARREN YOUNG: When you're editing a service template, instead of adding one item at a time, sometimes it's easier to grab everything. I don't know if anyone knew that. You can just drag a whole folder, and it'll throw one of every fitting on there.

I don't know. I thought it was kind of a cool tip. Otherwise I used to drag over fitting by fitting. Anyway, that's my tip. I don't know I'm behind or you are, or you're ahead.

JUBEL BEREN: I don't know what's happening.

AUDIENCE: [INAUDIBLE]

DARREN YOUNG: I don't know. Have to try it out.

JUBEL BEREN: Give it a shot.

DARREN YOUNG: I don't actually do the stuff I tell everyone else to do.

GREG MURPHY: That's a take at your own risk one.

JUBEL BEREN: What number are we on, fellows?

GREG MURPHY: We're on 29. So Node Edit. We have a couple of features we can actually look at troubleshoot, which we'll look at it in a minute-- we'll look at the items in there. But we can do a Node Edit on that active design line, and it'll show all the nodes that are in there.

So sometimes you'll find if you're looking for the button codes on those particular items, we can actually select Node here. And we can then pick that's the one I want to look at. And then that's the valve.

So in here, we can actually change the button code. If you actually want to change that to a gate valve, I can type in Gate right here and then refill it and actually put a gate valve there.

Now in some cases, you'll see here, when you're doing Designline assemblies, you'll find that some of those components are actually movable. So if it says Movable, Yes, that's kind of nice, because then you can use it for multiple sizes and the valves will actually move back and forth and slide within that. Next.

JUBEL BEREN: Is it me?

DARREN YOUNG: Yes.

JUBEL BEREN: I figured out the one I skipped. I showed you this new Manage button in the service. Check this out. There's a Manage button in the templates as well.

So now you can delete all the templates that you want out of this particular service. All at once, by whatever you pick. Kind of cool, huh?

Suggestion on both of those tips would be to archive your services. To Archive, Shift-right-click, Export, Service. So I would export those out before you delete, mass deletions on either one of those. Then I would go in and have fun. That's my tip.

DARREN YOUNG: This next tip comes courtesy of Scott Hendricks, from formally Inception, now Applied Software. I hope it works. I didn't try it.

JUBEL BEREN: [INAUDIBLE]

DARREN YOUNG: I hope it works, because I didn't actually try it out. But I trust him, unlike Jubel.

So I'm going to make a new folder here. And now it says AU under there. When I go into my Service templates, and I come down here, I don't see that folder anywhere in there. So a lot of people find that they're exiting the software to get that in there. They actually don't need to exit and reload the software. As long as I close that folders window, and open it back up, you can go then into your Service templates again, and that folder will now show up in there.

So you don't actually have to exit CADmep and relaunch it in there. The key is closing and then reopening that folders dialogue and it kind of refreshes the memory.

That's my tip. Scott's tip. Sorry.

JUBEL BEREN: Good one, Scott.

GREG MURPHY: Good one, Scott. Another one here is going to be using elevations and constraints that-- as we draw in Designline-- if we're doing it as an estimate, we're just looking at 10 foot, 11 foot, 12 foot, or if we're trying to get more finite on that. But we come back and add to an existing Designline, we can either just grab the elevation off of that. Or we can grab the whole constraint off of that, and then it'll actually fill in the elevation and the size for you, so that you can come off of there, at least now know what size it was and the elevation.

Pick off another size. And come off of that line. Add a note to it now, and then refill it. And then I know I'm going to get a drop out of that line that I didn't want to have a riser on, or maybe you did want to have one. Next.

DARREN YOUNG: All right, Jubes.

JUBEL BEREN: You know every time you upgrade your CAM stations-- let me open my CAM here real quick. It'll only take a second. You upgrade your CAM station in their columns-- or EST-- there's a detailed map file. You can actually-- before you do the installl-- maybe copy it to your desktop.

But anyway, if you copy that detail dot map file out of the [INAUDIBLE] desk, Fabrication 2016, CAMDuct folder of the existing user, maybe just stick it on your desktop. When you upgrade them to the newer version, you can drop that in and replace it, and it'll keep these columns all in line throughout the whole interface of the software, be it quick takeoff, this window, and so on and so forth.

DARREN YOUNG: You all good? It bears repeating, but I've seen a lot of people that go in the Folders dialogue. I can't create the situation now, but if you look in the handout, you'll see where I did screencap it at the time. I'll see goofy stuff like that, and it looks like the ITM is screwed up or maybe it doesn't exist somehow. Or maybe I'm coming over here, and I don't see particular folders that I thought were there.

You can always browse to Internet Explorer. And you can't always rely on the Folders view to be completely accurate. You can go to Windows Explorer, and you can see exactly what is and what isn't there. Because that Folders view isn't necessarily real time and may not reflect reality.

So if you have any questions, and you don't think things in that folders window aren't like they need to be, you might need to rebuild it. If you want to know for sure, go to Windows Explorer and you look in there and see where your files are.

GREG MURPHY: What I'm going to do is I'm going to go back, and I'm going to utilize my camera right now. And I'm going to go in here, and I'm going to store this camera view. This is number two, OK?

So what we're going to do is we're going to do a layout sheet here. So the command is LOS. So in here, I have some built-in camera views or views that I can look at. So if I do it right now, it's going to do the entire drawing.

But then I can come back and change the properties on this and say, hey, I want to look for Camera Two. Use that camera. Now when I go back in and fill in 3D-- so you can have multiple views on this.

This is good graphically for doing sheet metal a lot of times, but a lot of times we get in an MAJ, and I'm trying to show what the labor is on an area, I'll print this in 3D, so the guys will actually see it. So I send this along with the report.

JUBEL BEREN: All right, it's me. I'm going to do this real quick. The Fixer command. I did it last year, but I can't get enough of it.

Fixer command will help you adjust and rotate a component that you need. If you do Fixer, you select the base end down here. You can actually use these arrows to just roll it around. You can type in an angle.

If you need to, to reset it, you can just hit the button. You can actually set your fall here. 48. You have to hit Apply, then Close.

And you can see. Easiest way to see is with my attacher on. Can't see it probably. But you can see now it's sloping down at 48.

DARREN YOUNG: All right, my tip is using versioning in the database. Most of you may be familiar with that with Autodesk's locked content or Building data's content. I actually use versioning for our stuff as well. The reason we do that is sometimes we make content in one location and distribute it to other databases that our other divisions are using. And I want to make sure they have the most updated connectors and ITMs and things like that.

So in the database, I click this little obey versioning command. And then when we build an ITM, we can come back, change the order information, increment it so that we know. We do that to connectors, seams, materials, specs, all kinds of stuff.

And now when we import the IEZ, it'll see, hey, yours is version three. Theirs is version two.

Additionally, what we'll do is maybe we've got a connector and it's obsolete now for whatever reason. They stopped making the fitting. Well, we got legacy drawings that we want in there. We'll leave the connector in there, and we'll set the version to 9999 as a flag that, hey, you know what? This is here, supported for legacy reasons, but you shouldn't use it anymore.

So I guess that's my tip, is that versioning may come in handy if you're doing IEZ imports and exports between databases.

JUBEL BEREN: I like it.

GREG MURPHY: So we're on 38. Layout tabs. So in estimating, typically you want to do one drawing at a time as you're doing these as files. You can do multiple PDFs as an import. But if you're doing these layout tabs-- create another layout tab. Let's just do one called Supply. And I'm not really going to bring a background in. And then I'm going to do another one and call it Return.

So normally you'd bring in and share that same background. But now, if I took it off, and went, oh, crap, I didn't put all my supply on the right tab, I can now come down to my Global, say Show Selected Objects, I can then window these. These are my supply objects. I can then move it to that tab.

And now when I go to Supply, I have that information. And then I can go back and do the same thing on the others and say, now I want to move all this to my Return. Grab that data. And then move it to Return. And then I have my Return and my supply on the right tab so I can break that out.

DARREN YOUNG: You notice all their tips is to help their detailers and their boys be more efficient. My tips are all to help me be more efficient.

GREG MURPHY: Try to remember that next year.

JUBEL BEREN: As you all know, especially Kevin Allen over there, we set up processes in CAM and estimating. I've only got a few. I don't have the 200 he has in here.

But you can now set those up in CAD and use the ones that have already been in CAM. The command is Setup Processes. This field comes up. You can create-- just like you did in CAM and EST-- now you can set it up for your CAD users as well, so they can print their worksheets or their pipe labels or something like that.

DARREN YOUNG: This is probably my favorite tip that I like. It saves me a ton of time. And it's annoying.

I changed the view in here, in my Folders dialogue, to show the details. I also customized the column to add the version information so I could show you the prior tip, right? What happens when I go to another folder? It's not there. How many times do you keep on changing that?

So you know what I do? I come here, View details, let's go and we'll just customize this. Owner, we're going to tack that in there. I went to the root and copied the information there.

But what you didn't know, the code that I show you tip 41-- it's in a batch file that I copied in the root of my content. I'm going to click that. And this is going to run through. And what it does, there's a hidden position .bat file.

This controls all those settings. What it did, it copied that into every folder in my thing. As well, it also copied the batch file itself.

So now when I come down into some of these other folders-- if I remember right, did I do that right? No, I think I did the wrong folder. You might have to do it again. Come on. This used to work. I'll have to check on that. Anyhow.

AUDIENCE: [INAUDIBLE]

DARREN YOUNG: Pardon?

AUDIENCE: [INAUDIBLE]

DARREN YOUNG: Oh. I changed it in the wrong folder? Anyhow, if you actually do it right-- well, let's do this. Let's start out a folder here. Rename. Do this again. We'll go to Details. So that's in the Hangers folder.

Well, once that ran, I could come down here, ITMs, [INAUDIBLE] content. Where was I again? I forgot. Electrical, generic hangers, electrical, generic, hangers.

I'm going to run that again. It's fairly quick. But it will do just that-- darn it. All right. Well, anyway. We're going to copy that. Sorry.

I confuse myself. I'm trying to hurry too quick. I'm going to put that position back there. And now I can run this again. And now, when I go into these folders, it should remember those settings.

And it didn't. Used to work. Email me. Trust me. It does work.

But the nice thing is, it also copies itself to the subfolders. So if you want to just start at a certain point and change it-- so my piping is one way, and sheet metal's another-- it will work. I don't know-- this isn't my normal database.

But I do have that batch file. It's in the content but online. Just email me, and I'll get to work. I don't have time now. Jubel's going to get upset with me. Sorry.

JUBEL BEREN: I have a cool one.

DARREN YOUNG: It does work.

JUBEL BEREN: I'm just waiting.

GREG MURPHY: So if we ever draw in Designline, and we get these little-- oh, man, it didn't fill that thing. So we're going to go back with the active Designline-- make sure it's active-- we're going to go back and fill. We're going to go back and look at the troubleshoot of that.

This will actually give us a breakdown. Take a look at what didn't fill. So obviously, my open ends didn't fill, because I don't have a cap on. But if I now go click on each of these bends, I can come down here and take a look at this information and go, well, it failed to fill the 60 degree bend. Well, that's because I can't buy that fitting.

So now I can go back and change my Designline, because maybe I thought it was a 45 degrees, because I have 15 degree increments set on my polar tracking. So that's the reason it didn't fill. So you can go in there and troubleshoot, and then start scrolling down through here, and it'll show you all the button codes of the fittings that it actually tried to cycle through. So you can do a process of elimination and see what it should be filling with.

So in this case, I'm going to unfill this, I'm going to delete this designline, and then I'm going to refill it with a new one. So I'm going to create a new line, and then I can use tracking-- which is a bonus tip, here-- and then we can go and line them back up. And that will get them to fill, because it now will find that fitting.

DARREN YOUNG: By the way, I think I needed to close and open my Folders dialogue a couple times.

JUBEL BEREN: Are you still on that?

DARREN YOUNG: Yes, I'm still on that. Because it works. It's cool. It's awesome.

JUBEL BEREN: Process run in CAD. A lot of equipment that you guys use nowadays is online. A good one for the duct guys is CAPS software from Greenheck, if you're using those. That's a great software. It'll actually build the run file for you.

Don't have time for that. Darren's taken too much. You can now export this out after you get from CAPS. Sort graphics out, I'd say store it on my desktop.

DARREN YOUNG: If you use my tip, you'll get your time back.

JUBEL BEREN: OK. There's a joke there. I can't say it. So I've exported that out to my desktop from Revit. Do your process run. Open it up. You set your service type. Equipment. OK. Now you've got your equipment in your drawing. That's it.

DARREN YOUNG: Oh, gee, I just happen to be on the last tip yet. See? I got it to work. Sorry.

So my tip is, they've added a lot of cloud stuff to the software that nobody uses or cares about. Sometimes it can slow down your dialogues. One of the things you can do, you can browse to the install folders, and I can rename that folder. And it's kind of a protected area. Thank you, IT security.

Anyway, if you rename that folder, when you load CADmep or CAMduct, it won't find that cloud folder, and it won't load all that cloud stuff. And that can speed up some of your dialogues. You won't get the little cloud buttons. You won't get weird messages about cloud services being unavailable, things like that. Anyway, that's my tip.

GREG MURPHY: So now this is more of a Designline drawing option or user preference. So there's a feature here called Dynamic Fill. So if I check that box, you'll see it's now on.

Now when I draw, if I draw a new designline-- let's create a new one, here-- it's just going to fill that as we draw now. So it's just called Dynamic Fill. And that can also be utilized in the frame layouts. So if you do a frame layout and have your rack set up, then you can actually fill that at the same time.

JUBEL BEREN: Also available in CAD.

DARREN YOUNG: Is it? Are you sure? See, that's how I gain time. That was about five seconds.

JUBEL BEREN: You've had the ability to do this. But you can tag the elevation of your hangers from the bottom Z connector now using ctext. We're running way behind.

I'm going to make this quick and simple. There's a connector. Shoot. I had it set up. Oops. There we go.

Connector location Z, position bottom. Let me shoot it over so you can read it all. Just wanted to make you aware of that. Next.

DARREN YOUNG: All right. Anyone that's been in my classes last year knows that I love the registry. You could really whack out your system pretty quick with that thing. But why not play with it? So I'm going to go into the registry here.

JUBEL BEREN: Darren.

DARREN YOUNG: So how many people have ever run multiple monitors? Then you go somewhere with your laptop, and the dialogue is lost in space somewhere. You don't know where the heck it is.

You can come down to the registry, Current User, Software-- I can't see-- Autodesk, Fabrication, CADmep, Common, Dialogs. CADmep. And these are the different user accounts. I have a CAD user account. This is where it records all those dialogue locations.

You probably want to exit out of the software first. Delete these things out, or the one that you think is for your dialogue. It'll recenter it in the default position.

The reason you see some up here under CADmep without the user accounts, if you're running a database with no user security, this is where it's going to put them. If you run a configuration with user security, it'll store them differently between the different user accounts. I believe that's my only registry tip this year.

GREG MURPHY: I use this one probably almost every single day. It's called Combine MAJs. So as we're spooling the job, my shop foreman wants to pull these spools up, and he wants to review them and then order all the material. So rather than going back to the drawing to grab that information, we automatically create an MAJ for every spool we create.

So I can then go back, create a new job out of existing jobs. I'm going to batch process them together. I'm going to then drill down to where my spools are, grab my series of spools that I want to order or do labor tracking reports on, whatever.

Make sure that when you do this process that you don't have a process set to print everything. Otherwise your printer's going to be printing over there as soon as you process these.

So set this to none. We're going to add them over here. I'm going to say Next, give it a file name, hit Finish. It's going to then merge every one of those together. So no, I don't need to

save that one.

Depending upon how your MAJs were set right initially as they came out. And of course they're blank. So where'd they go? I lost them. Anyway, they'll all be in there. Then I can run reports on my spools.

JUBEL BEREN: I'm going to do two of the tips. I'm going to do 48 and 51 together. They're basically the same thing.

DARREN YOUNG: Aw, you're ripping them off.

JUBEL BEREN: No, I'm trying to catch up from your time.

DARREN YOUNG: All right. Sorry. Said they were the same.

JUBEL BEREN: When saving an MAJ to Revit, make sure that this Change Status to Export CAM is turned off. Uncheck it.

The other one is explode sub assemblies when exporting to MAJ for Revit. That's it.

DARREN YOUNG: Some minor little detail but maybe you don't know. When you look at the product list info in your ITMs, don't put inch marks in there. If you look at Autodesk's content, they actually do two single quotes.

The reason being is same reason you don't put a comma in a file name. A couple things I showed, where you're exporting to Excel as a CSV file, a comma in a file name throws it off. The double quotes also sometimes mark the beginning and X end of a text value. Putting the double quote in your product list information can fool Excel if you're trying to export that out into a comma delimited file.

So instead of double quotes, use two single quotes, and that'll kind of shortcut and cheat that.

GREG MURPHY: So I've drawing here. And I've got a couple of lines that maybe I wanted to be on the same service. This is probably not the best example. I'm going to fill these lines.

And then I'm going to make a new designline. And we're going to do that as, say, return. We're going to draw this one. Obviously this is a terrible example here.

But I have two different designline fills here, side by side. And maybe I want them all to be on the same designline. I can actually say Line, Combine-- if I can find the stupid command. It's

asking me, what designlines do I want to merge with the active one?

So really, where this comes in handy, if you do any Revit converts, and you're in MAJs, it breaks them all up. You can then go back and combine them, so they're all in one system. I can then pick this one and this one, and it'll merge it all as one designline. Go back and fill it. And of course, that broke that one.

JUBEL BEREN: No, that's right. It worked. Different size. Different size.

GREG MURPHY: Different colors. Go for it. Which one am I doing? OK, Darren, you're up.

DARREN YOUNG: Oh, that's right. You skipped one. Now I'm not ready. No. You guys ever have the little plus symbol in your services, when things get messed up, and then you fix it. And you just can't get rid of that plus symbol? Excuse me. There's a Refresh All Buttons command.

But one of the other things you can do, hold Shift-right-click, you get different options. There's a Refresh Buttons here. And sometimes you might need to hit the Clear Cache.

AUDIENCE: [INAUDIBLE]

DARREN YOUNG: Oh. Wrong screen. All right, see, now we're wasting more time.

So if you Shift-right-click, you get different options. Here's a right click. Shift-right-click. I have a Refresh Buttons and a Clear Cache. Sometimes I got to bounce around between them. Make sure you change services and go back to the other one to refresh the memory. But sometimes that can be helpful. Maybe switch off the one that's got the button image, clear the cache, refresh them, go back. And a lot of times, it'll be fixed.

GREG MURPHY: So I'm over here. So we're going to do a designline offset and/or elevation change. So I just did an example of what they would look like here, if this one will fill.

So the command is Line Offset. So offset is offset in the horizontal plane. So if I offset, I have an active design line, and I went back and I wanted to put an expansion loop or something in. I can then click this line, pick how far off that offset is.

And I need to be on the right elevation. Let's go back and pick it. There we go. Line Offset. Pick the two lines, come up, and I broke it again.

Anyway, this is the result. I just did it here. So there's my offset. So I did one in the vertical and

one in the horizontal plane. So this is called offset. So it's line elevation change. And then this one's line offset in a horizontal plane.

DARREN YOUNG: Jubel, you up again?

JUBEL BEREN: Yup. I just wanted to let you guys know about a really cool script editor, is what we call it. It's called Notepad++. In your handout, it shows you the address where you can download this.

Tim Catalano set up a COD language for us at RK that is freely available for you to download. His session was yesterday, but it's on the Fabrication Advanced Scripting. He'll have that COD language available for you there.

You'll go in there. You can import it, after you download it, import it. And then you'll have your COD language in there. He's already color-coded it, so you can see if you mess up when you're doing scripting-- where you messed up.

DARREN YOUNG: All right, I really don't have a whole lot to show. An empty mind is a great thing. So is an empty database. We use a blank, empty database a lot of times-- for QA/QC purposes. We use it for training purposes.

Make a copy of your configuration somewhere. You could actually load it up then and delete everything, purge and compact it. One of the other things you could do is just go in this database folder and delete out all the MAP files. When you launch the database again, it'll regenerate what it needs with some default materials, but it's a very stripped down database.

How we use that-- we'll bring in an IEZ. And hey, where did that material come from? You'll see things that maybe get sucked in. And it's a good way QA/QC, like an IEZ package, to make sure it's not bringing in other things you're not anticipating.

It's a good way to learn the database too. I see all the things that get added, because it's empty now. They stick out like a sore thumb. And you can see how some of these things are related. So we use a blank database all the time for QA/QC purposes.

JUBEL BEREN: Please don't delete your database.

DARREN YOUNG: Jubel is available throughout the year, if you have any problems. Yeah, copy of your database. That's my other tip. Ah, we're late.

GREG MURPHY: We're late? Last tip, then, I guess. If we're in Designline, and we want to route from-- you only

want to use this from, say, from one end to the other in the building. So you want to do your corridor work and do the layout.

So once I do this in one design line, I come back and do an OL for offset line here. Pick the line. It's going to say, what is my offset? Let's go ahead and put in 12 inches. And we're not going to offset the Z. So we're going to do a zero.

It'll then duplicate those lines. So I can now come back and activate one, fill it with supply, or return, and then vice versa on the other--

JUBEL BEREN: Ten-four.

GREG MURPHY: --so you can set your spacing.

JUBEL BEREN: I had an extra for my desktop. I deleted it, because people gave me crap.

If you hold Control while selecting a CADmep object viewer to view selected items out of an Xref. Only CADmep objects can be selected. Select items in current drawing first, and select items in Xref after hitting Enter once. Next. I don't have an example.

DARREN YOUNG: Again, something simple you may not realize-- if people have had legacy databases-- if you want to see what Fab looks like [INAUDIBLE] 2016, if you can see your database in CADmep CAM or EST 2016, you should be able to see it in Revit. If you don't, go into your database, right on the default screen click version, you have to have a GUID, or GUI, Global Unique Identifier, generated. You can generate one.

And so if this is blank, Revit won't see it. Add that to your database, save it, exit back out. You go to Revit. Revit will now see your database. Pretty simple little trick, but that's how you get Revit to see your database.

GREG MURPHY: So I went through some of the others, so I actually gained us a couple of items here. So we're going to create a design line template. So when you draw any line in Designline, we can shorten it up by just dropping the valve in here. So I'm going to say this is my template, my design line.

So I'm going to go to Template, we're going to save it. We're going to grab the endpoint that we want to insert it from and give it a name. We're going to call this 123.

And it stored it in my Template Locations. So now when I come back, I can then insert it. It'll

give me a list of the ones that I've actually created.

JUBEL BEREN: I don't think he hit Save on the last one.

GREG MURPHY: I didn't here Save on it. So it would be in my list. I could then manage them. And there it is. It had a bunch of spaces in front of it.

Anyway, I can manage it, delete it, rename it. But then I could reinsert those over and over and over. So you can create a chill water, coil hookup, pump hookup, so on and so forth.

JUBEL BEREN: Last but not least, more of the right click function. Shift-right-click in Folders. Here's the normal one. So if I select some items, if I do a right click, I only get these.

If I do Shift-right-click, I get a lot more options, like Creating Product List, Catalog, Change Specifications is in here. For instance, if I wanted to change this to piping materials, I can. So on and so forth. Change Properties is in here also. Shift-right-click, Properties, and I'll get those in there also.

Thank you very much for attending. Sorry we ran over.

[APPLAUSE]

When you guys get a chance, can you please fill out a survey online so we know where to improve. Thank you.