

**RK MCSWAIN:** All right guys, how you doing? So last year I was up against Lynn Allen's class, this year they put me up against the AU party, so. Everybody going to go to the AU party tonight? All right, I guess we'll get started here.

Couple of things before we get into the content. My colleague here, Kimberly Fuhrman is going to either-- I don't know how she is going to do it, but I want to collect business cards. I got a little give away to do later. You don't have to put your card in, I'm not going to spam you or anything like that. So if you want to throw your card in the bag, and we'll have a little give away a little later on.

How are you going to do it? Are you just going to walk around with it? OK, good deal.

**AUDIENCE:** Pass it around.

**RK MCSWAIN:** All right. So I'll get started with the intro. You guys are probably familiar with Lynn Allen's 60 Tips in 60 minutes class. So I kind of stole-- I mean borrowed the--

[LAUGHTER]

--concept from her with her permission. And we're going to do as many as we can get in an hour. To be honest with you up front, I've got about 30. So we're going to spend about two minutes on each one.

I went through the AU website and e-mailed everybody maybe six weeks ago to let you know what it was. It's not so much a theory class as it is some hands on tools. And so with a little bit of IT slant to it. So just let you know what we're going to be jumping into here.

I think everybody seen this when you registered for the class, and it's on the handouts. So I'm not going to go over that in any detail. Give you a little background about myself. I've been in the civil survey industry for a little over 20 years.

I currently serves as a CAD manager for an engineering firm in Houston. We have about 20 offices mostly in Texas. And around 2005 I created my website, CADPanacea.com. I'm a member of Expert Elite and various council groups with Autodesk.

Just to give you a little more that isn't on there, so I started out, like I said, about 20 years ago

I had very little experience, and I got a lot of that experience from my coworkers and in the old Autodesk newsgroups, way before they were considered the forums. And so as I went along I started out coming to AU. In 2004 I was a student, just like you guys, or most of you guys. And I've worked my way up, and now am really trying to give back. Like I said, I've learned from the people who were ahead of me in the time, and now I'm trying to give something back. So thought I would try my hand at speaking here.

I had one class last year, and they surprised me when I picked up my stuff in the speaker room, because they gave me a top rated speaker from last year. So I appreciate if anybody was in that class, if you're in here again, appreciate those reviews and hope that I do as well this year. What I wanted to end with that, we'll get in the content in just a second. you guys are spending an hour with me, so I want to make sure you get something out of it.

Do I know more than all of you? No. Do some of this stuff we're going to cover? Probably. But I hope you get something out of this.

If you don't let me know. Be kind in the reviews, the class reviews, but let me know. Because I want to-- I've been on your side of it before. I've sat in a class where 90% of the people walked out in the first three or four minutes, because it was-- this was back in 2004. And I don't want to be that guy, so.

The last thing before we get started, I was treating this as a lab in my head. And I realized that as I started rehearsing in the last couple weeks that I'm really not going to have time to dive into the actual usage, meaning I'm not going to be able to demo each one of these tools. But if we finish up a little early, and there's something you want to actually see in action, let me know and we'll pop it up there if we have some time. I know you guys want to get out of here and get ready to go the party, so let's head into it.

What is our job as a CAD Manager? From my experience this could be-- you may in charge of a production group. And you might be responsible for doing billable work yourself and with your coworkers. You may be part of the IT department.

That's where I fit in, that's kind of what I do, applications set up, support maintenance. I don't actually use Civil 3D every day anymore. But I'm helping our users. We have about 220 users spread out about 16 offices, so that's where my duties are.

You may be doing all of the above and even more, especially if it's a smaller firm. Whatever

your job duties, I'm sure that you want to make life easier for yourself and your users. And that's where I'm hoping we'll be able to show you some tools and tips and things here. I'm going to get this started in just a second here.

All right, so the first one. On your application menu in your recent files, if you've got sheet sets or other files that land in those recent files, and they're on drives that don't exist anymore, or their own slow drives, or anything like that, if you've ever clicked the application menu to hit your recent files and it just sits there. And it sits there for 10, 20, 30 seconds, you've probably got some either DWG files or DST files for sheet sets that are on locations that are either slow or nonexistent anymore.

Jeff Mishler, Civil 3D guru, he's also an expert elite. He came up with this tool, posted it in the forums maybe two, two and 1/2 years ago. It's just something he came up with on his own to fix this.

And, essentially, you will load this tool up while AutoCAD is not running. You can't have AutoCAD running while you run this. You load this up. There's no install or anything either, it's just run from the executable. You will select the version of CAD that you have installed, and as soon as you select this, it will populate with the profiles found on that version. Then once you select the profile, you'll see a list of DWG files and a list of DST files, which are the sheet sets.

Click on any of these. Click on any of these, highlight them, you can also hit select all, hit remove, they're gone. So there won't be any more recent files. You probably don't want to remove all, because you want to have some recent files. But if there's anything you've ever opened off a flash drive, or anything like that, you're going probably want that out of the list.

So the one thing I didn't mention in the intro, if you've downloaded the handout and looked at it, I did not put the links in there. You won't find the links to actual files, but on the one I will update when I get back, it will have the actual links. You can go in there, and click on them, and find these tools.

Next one, who knows about SuperPurge? A lot of y'all, OK. Manusoft.com, SuperPurge will purge anything out of a drawing, pretty much. How it does that is it goes out and finds the references to those objects that you normally can't purge and gets rid of them.

So let's say, to make it very simple, let's say you have a line on layer a, and you want to purge layer a. Normally you can't do that, the purge command is not going to get you. SuperPurge

will go in and find that layer you want to purge, and it will find that line that's on that layer, delete the line, and then purge the layer. So it's kind of dangerous, in a way, if you get somebody in there that doesn't know what they're doing.

I think I put up here, work on a copy of the drawing so you don't damage the one and only copy you have. One use I've seen people do with it is if you have plain AutoCAD and you get maybe an architectural drawing or Civil 3D. Those things will be in the list of dictionaries, and you'll have to work your way through there and figure out what it is. And you're working on a copy of the drawing.

And you can get that stuff out of there without needing Civil 3D, or Architecture or whatever it is. You can get rid of all the extra bloat and stuff that you don't need. If you're just using plain AutoCAD and you don't need that stuff.

Retail price is \$30. If you've got 200 users, you probably don't want to buy it because of the cost. And you probably don't want some users having it anyway. So get a copy for yourself, maybe a couple of power users. When you run into some problems drawings where you can't get things purged, fired it up, it's a really good tool.

Offline help. If you have any users who are mobile, or if your office is restrictive about what you can access on the internet, you can download offline help. It used to be-- the help used to be local. It was just a couple-- I say a couple. It was a few CHM files that lived on disk.

Well now that online help is online, if you can't access it because of internet restrictions or anything like that, your users may not have access to it. So you can go to the-- again, there'll be a link. This link, right here, will take you to the search tool. You can go find what version of help you need, whether it's Civil 3D, AutoCAD, and download it.

It will look just like the installer for the software itself. You go through a few steps, it will install it. And I may hit this when we get to the end, but you can go into AutoCAD and on the System tab, I believe, there is a checkbox that says use online content when possible. If you check that on, and you are online, it will fire up the online help. If you have the offline help installed and that is unchecked, it will fire up the offline help by default.

Who uses sheet sets? Probably a lot of people. All right, who knows about this tool, The SSMPopEditor from JTB World? Another tool kind of like SuperPurge, it's something that you-- it's kind of hard to live without. If you've ever done something such as-- this is a small sheet

set here.

But if you've ever had a 100, or 150, or 200 page sheet set, and you needed to insert 10 sheets, and all of a sudden you have to renumber the whole set, that can be time consuming. That's just one of the features SSMPPropEditor will let you do, renumber the sheets from 1 to 150, or whatever it is, plus adding a suffix, a prefix, whatever you might want to add on to those sheet numbers. You can also take sheet properties from one sheet and push them out to the other 50, 60, 100 sheets, whatever it is. Something else you can't do inside of Sheet Set Manager.

It also works on-- I'm not familiar with AutoCAD Architecture. But if you are, and you probably know where the project navigator files are too. \$50 is the retail price for this tool.

Again, you probably don't want to buy a copy for everybody, but power users, yourself, you can work on the sheet sets. This does not even require AutoCAD to run. It operates on the DST file itself.

So it could be even-- if you had some custom properties such as, maybe you had a client name, or something like, that you wanted to insert in the set, somebody that didn't even have AutoCAD could sit there and do that operation for you.

**AUDIENCE:** [INAUDIBLE]

**RK MCSWAIN:** No, because it works on the DST file, and as far as I know those haven't changed versions. Or if they have, it's still compatible with all of them, so. Same would go for SuperPurge. They do come out with newer updates, but it's not like you have to get a new one if you update AutoCAD or anything like that.

Let me grab some water real quick. Excuse me just second here. I'm getting a drink of water.

Who has used Screencast? Also more people than I expected. So if you've used it, you know what it is. It's a screen capture utility that captures the action of what you're doing.

It also captures keystrokes. And when the user plays the video back, you can actually see what keystroke was being done at that moment in the recording. And that's what all these are.

There are commands, there's dialog boxes, settings, and it tells you what product it is. It will not only capture AutoCAD and AutoCAD verticals, but it will capture anything in Windows. So if

you want to show a bug in some other product, and you're trying to illustrate it to somebody, or show somebody how to do something in another anything. Could be a browser, could be notepad, whatever, it will capture that and create a screencast for it.

After you're done inside the program you upload it to Autodesk, they process it on their side, they email you back a link to the video. What can you do with that? You can email the link to someone else, you can stick it in a forum post if you're trying to get some help on it or show somebody what the problem is, it's integrated into the Autodesk forums. You could use it for training purposes internal, anything like that. It's really a pretty nice tool.

You may know about Camtasia from TechSmith. I'm not up to date with their latest products, but I don't know if they capture the keystrokes and all that also. But that's one nice feature of this, it really is made for the different products, such as AutoCAD, and Revit, and other things. Yes?

**AUDIENCE:** [INAUDIBLE] Can we download the disk video to a format [INAUDIBLE]?

**RK MCSWAIN:** OK, so Paul says you can download the video, it just doesn't come with the keystrokes in it.

**AUDIENCE:** [INAUDIBLE]

**RK MCSWAIN:** Right. Yes, sir.

**AUDIENCE:** [INAUDIBLE]

**RK MCSWAIN:** Are you asking if the recipient has to be an Autodesk user? No. No, anyone can. You can send them a link to the videos.

There's different permissions that you would apply to it when you upload a video, whether it's private or by link only, or public. So if it was, you would need to set it by link only or public for someone else to see it besides yourself. But it will run in Internet Explorer, Chrome, whatever. It just runs in there as a video.

How many people have ever had a user monkey around with the CUI file to the point where they mess it up? So you probably already know about this, but maybe you don't. I don't know, we'll talk about it a little bit.

So they get in there, and they start messing around, and the contextual tabs stop working, you've got buttons missing, and so on, and so on. Right-click go into-- I'm sorry go into the CUI

command, right-click, either hit the main menu at the top. I don't have it in the screen cap here, but if you go down you have your partial CUIs, it also works there. Right click on it. Restore is going to restore the last version of that CUI file that was made before you made the last edit.

So if you know the person only made one edit, and they messed something up, you can usually restore it to the very last one. Reset is going to go grab the stock menu file out of where it grabs it, and it's going to reset it back to normal without you having to do like a repair, or reinstall, or anything like that.

So that's a pretty quick one. You good? OK. Seems like it gets drier here every year.

If any of you guys have ever-- I'm sorry we got a question here.

**AUDIENCE:** Can you go back to the--

**RK MCSWAIN:** You bet.

**AUDIENCE:** So under reset--

[COUGHING]

**AUDIENCE:** --if you change the path for your CUI or [INAUDIBLE]?

**RK MCSWAIN:** On the Reset. What'd you say, Paul? Yeah, I think it goes back to the default out of the box. I'm not sure about the restore.

I'm guessing it's going to go grab the BAK, the CUI. I guess it puts a BAK file extension on it. And it goes and should grab that last one.

So if any of you guys have ever seen me in the Autodesk forums, or my blog, or anything, you know I'm a big proponent of the Process Monitor. And that's because I've used it several times to find problems that are usually caused by Windows. AutoCAD asked Windows to go find a file, go find something, and it's not there, or there's some other issue like that.

And so maybe you have a user that fires up AutoCAD and you get the little spinning cursor, and it's just sitting there. Maybe it's on the splash screen and it says something about loading template. And it's just sitting there, sitting there, sitting there, you don't know what's going on.

If you fire up this Process Monitor, again, you'll get the link in the new handout that I'll upload.

It's a standalone program, it doesn't require an install. It's tiny, you can put it on a flash drive, carry around with you.

Load it up on the user's machine. You would set the filter. It's going to prompt you for a filter when you start it out. Set it to acad.exe on the process name. It's only going to capture the processes that have to do with AutoCAD at that point.

You can see down here that is like 9%. It's captured 150,000 of 1.6 million things that are going on in Windows. So shut down, restart the machine, fire this up, fire up AutoCAD. When it stops responding, hit the pause button here on the scrolling and check out and see what's going on here.

Is the Process Monitor still recording activity? Is it doing something? Is it trying to find a file on the q drive that doesn't exist anymore or something like that?

It's not a fix all tool. It's not going to tell you, necessarily, where a problem lies, but it can. If you have some files that are missing, or a drive letter that's not there anymore, or something like that, you'll see this will sit there, and it'll stop on it. And I'll say something over here in the path like, it was looking for q drive so and so, and it's just sitting there.

And what it is is Windows is out looking for it. And eventually it'll give up and AutoCAD will come to life, and so on. That's one of the things.

Another example of when I've used it is we had an issue where every time someone fired up the mtext command it took about 20 seconds before you could start typing. Come to find out-- don't know if it still does it today, this was several years ago, but when AutoCAD fires up, it doesn't load all the SHX and TTF fonts in the memory. It does that the first time you use a command that needs text.

So we had 400 plus fonts in our path. And so when someone would fire up the mtext command, it was waiting 20 seconds. And what it was actually doing, I could see this thing scrolling by, loading up every font one at a time. So we got together and pared down that list to about 40 fonts instead of 400. And voila, the mtext command came to life right when you fired it up.

The second half of this is the Process Explorer. Again, it's a standalone tool, doesn't require an install. This is a little more high tech, meaning you might-- if you're not part of the IT



department, you may not have their permissions to run this, but you can show this to them too. Same type of thing, except what you're doing here is you're actually digging down and working on the acad.exe process itself.

It's going to give you more information than the Process Monitor, which shows you file and registry access. This is actually going to dig down and tell you is this thing hitting the CPU? Is it-- I can't read that one there-- oh, is it doing any I/O? There you can see there's several tabs for inspection.

It's quite complex, but if you've got the program sitting there apparently doing nothing, and you see a lot of CPU activity, you think it's doing some I/O. Well you know something is going on. At least it'll give you a clue of where to start looking for a problem.

Who uses Network License manager for network licenses for CAD? OK, so this is something that I ran across, I don't know it's been a while, but it's helpful. It's another short little tip.

If you are upgrading the License Manager, or you're putting a new license file in. You're doing some kind of changes on the end, and maybe you're at work on a weekend, or something, and you're testing it out. And you fire up your CAD and you can't get a license.

This is a quick little test. Put this URL in Internet Explorer only, not Chrome, or Firefox, or anything. Replace server name with the name of your server. And if you get this in the browser window, then your client machine is talking to the License Manager and there's some other problem like the license file is bad, or there's not enough licenses, or something like that.

If you don't get this, you get a error page not found, or something like that. That tells you you've got a firewall issue, or some kind of network connectivity issue going on, because-- don't ask me what this is and where they came up with this, but it will come up. And in fact while your License Manager is up and running, you can go try that, and you should get the same thing.

Like I said, if you don't get this you've got some other issue. The LMs not started, or there's some kind of communication to the ports. And there's a link on here that takes you to-- I think it's a blog post that goes into more detail about that.

How are we doing on time? We're going all right. OK, we're up to number nine.

Some of these tools, such as this one-- I'm not saying this is the only one out there. You may

have, depending on your level of involvement with the IT, you may have some more different tools, some better ones, worse ones, whatever. It's a standalone tool, doesn't require an install or anything. Throw it on a flash disk.

LAN speed tool. It will pick up the computer name and IP address of wherever you're running it from. Then you put it in a path. This path was where our DWGs were stored, and run it. And this is actually a local drive, I probably shouldn't have used this for the screenshot.

But, if you've got a gigabit network and you're getting 90 megabits per second, you know something's wrong. I ran across that several times where we had our phones change, VOIP phones. And they changed out the phones, and some of the phones weren't configured right. I don't know the details, but they were only passing through 100 instead of a gigabyte.

And it was clear to see that the user wasn't getting full speed through that VOIP phone, and it was an easy fix. We just called the guys and said, hey, you guys got a bottleneck here in the system. They went down and changed it out. Everything was back to speed.

A symptom of that case was very slow save and open times. It was taking several minutes to open and save a drawing either way. So just a quick little tool that like the first thing you might check if someone's complaining about slow CAD. Are they getting the full speed network that they are supposed to be getting?

Screen to GIF. We talked about Camtasia and the Screencast. Those are good tools. To make a little animated GIF, it's just a small little tool, has no install. You run it. Does everybody know what an animated GIF is? There kind of old. They've been around for a long time.

Basically it's just a series of screenshots that compile together into a g-i-f file. And it will run in most browsers. You can throw it up in forums if you're asking a question.

You could send it to somebody. They may or may not be able to see it, but you have similar problems with AVIs, or WMFs, or any other kind of video. The user may or may not be able to see it on the other end.

So why talk about this if we already talked about Screencast? You don't have to upload this and get the URL back. Instead you can just make a quick little video, like I'm illustrating here. That is one of them right there, where we were doing some-- making some changes. And I don't remember exactly what I was illustrating there, but just a quick way to get a little illustration together.

So let's see. Yeah, if you're going to make something, depending on the size of the screen, if you open this thing up and try to capture your entire 4k display, you're going to have a huge file. It's going to be ginormous, because it is a series of screenshots just put together.

If you pare down the window size, when you start this tool if you hit recorder, you're going to see a little window pop up. You pare down that window size, like I did here. So I'm not capturing the command line, or menus, or anything, just the area I'm interested in.

That file there is probably, maybe 400k or something like that. So the time, 60 seconds, really actually depends on the size of video you're capturing also. So it's got its use just like the Screencast or Camtasia does.

**AUDIENCE:** [INAUDIBLE]

**RK MCSWAIN:** I'm sorry?

**AUDIENCE:** [INAUDIBLE]

**RK MCSWAIN:** Oh, you're welcome. SnagIT. So we talked about two different type of video collection tools. This one, probably, most of you have heard of. SnagIT is the static image collection tool.

So why do you need that when Windows 7 and Windows 10 have this Snipping Tool? Well that Snipping Tool is great if you're just quickly grabbing something. You want to send it to somebody.

If you're putting together some help documents, or anything you want to have a little more professional touch to it, the SnagIT has so many more tools to it that you can do. All these toolbars up here, there's several different things. You can put nice leaders, and squares, and circles, and comment, and things like that on there. On your images if you're sending it out, or if you're trying to put together some help docs, or anything like that.

Have many of you use this already? That's cool. There's other programs. Again, I'm not trying to say this is the one and only, but I've had a lot of success using it, and works well. If you need something like that it's worth looking into.

Sizer. This is my friend, Paul Mumford, right here in the front row. He turned me on to this thing.

Now I do have to demo this, because it took me a while to figure what it was even used for. So, we'll see if hopefully I don't lose my video up there. Give this a shot. Yeah, I know, I know.

Kim, would you like to ask Paul to draw a card out of the bag and--

**AUDIENCE:** [INAUDIBLE] Although, you know too many [INAUDIBLE] looking at [INAUDIBLE].

[LAUGHTER]

**AUDIENCE:** It's mine!

**AUDIENCE:** [INAUDIBLE]

**RK MCSWAIN:** Bad corner. So, again, one of these little tools that doesn't require an install. It's got a dll.exe, that's it. When I ran it, nothing apparently happened. Again, this would be useful if you're putting together documentation, or maybe you're putting together an internet site, or even an external website where you need some images to be a certain size, because you want to make sure that the whole image shows up all the time.

So right now my resolution is like 1920 by 1080, I believe. If I come down here, I click on AutoCAD to make it current. I run in here to the tray, I think everybody can see that down there. Right click, and I've got several different resolutions here.

If I click 800 by 600, it's going to take AutoCAD and make it exactly 800 by 600. Not too useful for working with users, but if you're putting together documentations. Paul turned me on to this.

**AUDIENCE:** [INAUDIBLE] techniques [INAUDIBLE] YouTube. [INAUDIBLE]

**RK MCSWAIN:** Gotcha.

**AUDIENCE:** [INAUDIBLE]

**RK MCSWAIN:** So, yeah, Paul is saying, if you want to upload things to YouTube, it's very important that they be the correct size, so.

**AUDIENCE:** [INAUDIBLE] or can you drag it and make it bigger?

**RK MCSWAIN:** You can drag it make it bigger, yeah. And then reset it around. It has options, you can tell it to center it, or put it in the upper corner, whatever.

**AUDIENCE:** [INAUDIBLE]

**RK MCSWAIN:** All right, here?

**AUDIENCE:** Yeah. [INAUDIBLE]

**RK MCSWAIN:** It's supposed to?

**AUDIENCE:** [INAUDIBLE]

**RK MCSWAIN:** Oh gotcha. Gotcha, OK, right click on the bottom corner and you can resize it to another different size. That's what Paul's saying here. Back to full screen.

**AUDIENCE:** [INAUDIBLE]

**RK MCSWAIN:** Yeah, whatever the current window is is what it'll resize. So if you have multiple things open, whatever is current. Then you go down to the tray, and right click on it, and choose that and it'll-- are we back here? Yeah, we're back, OK.

**AUDIENCE:** [INAUDIBLE]

**RK MCSWAIN:** I'm Sorry? All right, Renamer. Again, this is one of these tools that I'm not saying this is the best one out there. I'm not saying it's even a really great one, but I had to have something for the screenshot. So, renaming files.

I have had cases where I had one of our offices-- this was several years ago-- they had all their job numbers set up like 2410 dash 1600. And then inside that folder, they had all their drawings labelled 2410 dash 1600 dash whatever. And this was all over the place. That was just duplicating information.

I don't know if it was this one, it probably was a different tool. But you can see on the bottom here how we took the same situation here. We took the c 2027 0181, and we stripped it off. And that's going to be the new name.

Renamer Light, I don't know. There's several out there. You can Google and they probably have, if you've needed it.

But just to let you know there's tools out there that can do things like this. You can add suffix, add prefix, you can replace characters, there's all kinds of different ways you can rename files

in here. So it's pretty useful if you've got a whole batch of files that you need to rename, because somebody did something they weren't supposed to. Which is generally why we all have this job anyway, right?

Autoruns. Another one of these tools, no install, it runs from a flash drive, whatever you want to do with it. You can put it on a network drive that everybody has access to and hit it from there.

When you started up you should probably not do the everything tab, because there is like a million things that Windows loads that you're not even going to care about. Jump over to the log on tab, it's going to have the places in the registry where there's a run. It's going to have the startup items in Windows. And you're going to see 10, 20, 30, 40, 50 things there, whatever.

The nice thing about this tool, you don't have to go digging in the registry, and you can uncheck an item and it will keep it from starting up. But it also if you find that your user comes back, and you see this is some Bluetooth things and he says, hey, my Bluetooth mouse quit working, what did you do? You don't have to go find all this and repair it. You just check them back on.

So it doesn't actually delete them, it just turns them off for the moment. Restart, see how things are working. If--

**AUDIENCE:** [INAUDIBLE]

**RK MCSWAIN:** Yeah, yeah. So if you've got some guys, and they've got iTunes and all this other stuff that you don't want them loading up start up, jump over to their machine and run this tool, and, hopefully, they'll get the message.

Here's another one of these. I'm not saying this is the greatest one, it's no. It's just an illustration Diff tool.

We're going to talk about something in a few minutes that I should have put before this, but any two ASCII files. DiffChecker.com is one online way to do it. You can take any two files, upload them. It will tell you the difference between them.

One place I've used this would be for checking menu files or anything. Basically anything that you have two ASCII files and you just want to check the differences. I use an old one.

Sometimes I use an old one called FCompare. It will actually let you compare two directories, so if you have a directories of-- you can do that with putting two Windows Explorer next to each other. But what if you've got 4,000 files in there? You may not be able to easily visualize that.

This one will do directories and files. That's an actual download. The DiffChecker is an online tool where you go in there and you load up two files. And, obviously, I purposely made this change to show you what it looks like, it highlights it out. Again, one of those things that you may or may not have a use for, but if you do it's nice to know you have something there to use.

CTB, PC3, STB, and PMP files. If you try to load one of those up in anything other than CAD, such as Notepad because you want to find out what's going on with it, you can't. It's all binary stuff.

There is a website out there that has tools. And, again, you'll get the link. Has tools out there that will let you see the inside of these files, not so much for making changes or edits, but, at least, you can go in and see what's going on. Again, maybe someone has made some changes to some files, such as the CTV file where they've change the colors, or they've changed some of the line weights, or anything like that. You can quickly scan that file down from top to bottom, and look at it, and say, oh, I see what's going on here.

I know you can do the same inside the tools in AutoCAD, but this is more of like a spreadsheet view. It just gives you a quick overview of it. You can actually extract the contents of PC3 and PMP files, and where that may be important is inside the PC3 file there can be a path to a PMP file. You can see that in the tools inside of AutoCAD, but, again, you can scan through several files pretty quickly using these online-- not online tools, but these small executables. There's no install or anything needed for these also, so if you want to scan those files it's a quick way of doing that.

Now people are going to start laughing at me, because I'm using some old DOS stuff here. And you're probably going to say, well, wait a minute. What about PowerShell? What's this? OK, PSTools. There's two things I use in here, it could be useful for you.

PSTools is another set of downloads from the same place as the Process Explorer, Process Monitor, and so on. No install needed. You copy the files out, you open a DOS prompt, and

the two things I wanted to talk about on here are PsExec and PsKill.

The PsExec lets you run a process on a remote machine. So if you're trying to find something out about one of your users' machines, you can run this tool. For example, on the screen what I'm showing is IP config. You want to see things about their IP configuration. You can go-- I don't know if you guys can see that from there.

But it's PsExec, and there's the name of the machine, a switch, and then IP config, and all. And what it actually does is it goes out to the other machine, runs the command, and gives you the results of that command in your DOS window on your machine. So you don't actually have to walk down the hall, or drive to the other office, or try to explain to the user how to do it.

PsKill is a command line utility just like that. And what it lets you do is kill processes on the remote machine. So, again, if you got your guy out there and he's running iTunes, and he's complaining about everything being slow, just zap it in the background. He never knows the difference. Until his music stops, I guess.

How do you know which process to kill? Well I'll get to that in just a second. How many of you ever seen this tool? WinDirStatPortable. Paul, a couple of others, OK.

I love this, because I have users call me, and they're complaining about, I'm out of disk space. What's going on? You can fire this thing up. Another one of these no install tools. Point it at any drive, even network drives.

I wouldn't suggest running it on a half a petabyte drive, or anything like that. But run this. In this case, I ran it on the E drive, and what it's going to do is put the files, the directories and files, in order based on the largest at the top and work its way down. So if I clicked into Autodesk I would probably find, I believe, these are actually the Autodesk downloads, the two gig files that we downloaded for the installs, and so on. And it's working its way down the list.

The colors at the bottom, this big blue one, each one of these blocks, whether it's a tiny pixel or an entire giant block like that, each one of those blocks represents one file. So you can quickly look at this and see that I have one file taking up almost half the drive. If you click on that file it will take you to it up here in the list, wherever it is.

So if a guy has got 50 may-- or 50 gig of MP3 files on there, you'll be able to find them really quick. Otherwise he may have them buried in a directory that would be hard to find otherwise, or whatever it is. You can start with the colored boxes, or you can just start drilling your way



down from the top.

If it's a local drive, depending on the size, it may take five minutes to scan it. If it's a network drive it's obviously dependent on the size and the speed. It could take a long time to scan it. So if you're looking for something on a network drive, then you might want to start at a lower level, not at the root of the drive.

Time? OK, Good. This one isn't as much a tool as it is a suggestion. Be proactive with your drawing clean up.

In the situation that I'm at, we had several drawings, several-- I shouldn't say several drawings-- several drives full of drawings that had the DGN Linetype bloat. Everybody know about that? DGN Linetype stuff gets in the drawing. The RegApps, the excess scale list, things like that, had been growing over time. And you can send out an email and tell your users to run these tools, and they may or may not do it.

What we did is we set all this stuff up in the ACAD.LSP, and ACADDOC.LSP, and even some of the MNL files, and now when the user opens a drawing-- we've had this in place for maybe a couple of years. When a user opens a drawing it does all this stuff without them even knowing it. Anything else you want to put in there, that's just one example of something you can do. Most of you guys probably know you can do stuff like that, but.

So did it hurt performance? At first, yeah, because these drawings were excessively bloated. And it took a long time for them to open, because it was having to do all this stuff.

But now that we're in these drawings, open them every day, they're clean and they stay clean. If we get drawings in from the outside, they open them, it does all this stuff automatically. We don't have to worry so much about bloated drawings coming from outside sources anymore, just cleans them up right from the start.

This is really old. It's probably older than some of the DOS stuff. Msinfo32. Why would you want to run this tool? It's been around since Windows 98, maybe even before.

It can still give you some useful information about a remote machine. And I'm talking about remote machines, because you've got users maybe in your office, maybe in other offices. As long as you can get them on the network, you can use this tool to hit them up. You can find out things such as the processor type, amount of RAM, amount of hard drives, a list of

environment variables.

If you're configuring your machines to talk to the network license manager with environment variables, you can drill down in that list and find out what those environment variables are-- thanks-- on that machine and make sure they're going to hit the right license manager. So it's got some usefulness. It's got two things in it that it doesn't tell me. Just a second here.

And for that I'll use this next tool. Systeminfo, it's a command line tool. Systeminfo forward slash s machine name. Run it in a command as long as you have the proper access to that remote machine. The two things in here I use a lot are the Windows install date and the last boot time.

Why those? If I had a guy call me one day and he's complaining, my machine is really slow, it's bogging down, duh duh duh. While I'm talking to him, I fire this up. I get him to tell me his machine name. I look and, in this case, this one's relatively new.

In his case his Windows install date was 2010. So I know he had six years of Windows, and everybody probably knows what happens with windows over time. It gets slower, and slower, and slower. So I knew, about that point, he's probably got a hardware software issue and that we should put him in line for a new machine.

If the date was this, this is one year ago, then I might think, well he's got some data file problems or something like that. System boot time, I've literally had people tell me we'd make a change on something, maybe change some drive letter mappings, or something like that, and they call and they're like, hey, I can't get into my drawings. What's going on?

Oh, have you rebooted? Yeah, I rebooted this morning. And while I'm talking to them on the phone, I'll pull this up, hit the machine name in there, and I can tell they rebooted on Monday morning and today's Wednesday.

They don't want to do what we want them to do. It's a nice way to jump in there and say, no, you didn't reboot today. I can see right there.

I've got some quick ones coming up. If you don't have SuperPurge and you've got some layers you want to get rid of, LAYMRG. LAYMRG will move whatever it is on the layer you want to get rid of to whatever layer you tell it to. In this case, I would say zero, because you can't purge the letter zero anyway.

If the data is embedded in a block, embedded in any kind of non-graphical data, or whatever, it will move it to layer zero and purge the layer. I use the term poor man's version of SuperPurge. Unfortunately it only works on layers. But it is a cool, little way to get rid of that problematic layer that you can't seem to get rid of any other way.

QAFLAGS, who's heard of this? Man, a couple of hands. It's probably the most undocumented command out there. I've seen people go as far as reinstalling, uninstalling and reinstalling, to fix a problem that could have been solved by typing in QAFLAGS and setting it to zero.

It does some weird, strange stuff, and I believe it's still undocumented system variable. There will be a link in the new handout that I upload, and you can go in there and read about all of the crazy stuff that does. But if you see a weird problem that your user's having, and you're going, wow, I've never heard of this before, what's going on? Check out QAFLAGS on their system, make sure it's set to zero.

How does it change? How does any system variable change? List files, or other things, who knows. But I've seen it change to one, or two, or three on systems before, and it just makes it cause some weird problems.

So we were talking earlier about the file compare, and CUIX came out-- I'm not sure when, does anybody know? Maybe 2008 or '09, something like that. It used to be just CUI files, which are really XML files. And then they bottled them all up into one CUIX file, which is nothing but a ZIP file. I don't know if you guys knew that.

You can take something like 7-ZIP, or WinZip, or whatever, extract all the contents of a CUIX file to a folder, and what you will find is a bunch of images and CUI files, like the old CUI files. And those CUI files are XML, so they're text-based. So you can use those programs like the comparing files, or you can search them with Notepad, or whatever you want, in case you're looking for, again, looking for something that shouldn't be there.

Maybe a guy's hit his menu, and he slows down, the file's dragging, or whatever. And you go in there and find out that he's got some references to blocks, or something like that that's embedded in that menu file. You could probably find it by searching through the CUI command, but this is really quick. You just dump it out to CUI files, put it up in Notepad, scan it for-- maybe you got rid of the Q drive last week. Scan it for q colon backslash and see if there's any references to it in there.

Resetting the user profile. If you have a user that has a problem, whether it be slowness or just weird things going on, log in to the machine yourself or have another coworker log into the machine under their Windows profile, preferably one that-- someone that hasn't logged into that machine before, so you get a nice clean Windows profile. Try to recreate the problem. If it doesn't happen, it's probably related to the original user who is having the complaints, probably related to their profile.

From 2015 and later you will find this in the Start menu under the programs. You run that. I believe it asks you if you want to create a backup file, and then it basically zaps everything and puts you back just like you were when you installed the software.

2014 and earlier you can click on the Autodesk Knowledge Network and do a search, and there will be instructions in there for how to reset the user profile. I believe it involves renaming two directories and one registry entry. Or I may have that backwards, maybe two registry entries and one network directory-- not a network directory, but a file directory.

And It may say delete those things. I would rename them, and just in case you ever wanted to put them back. If you delete them, they're gone forever. Once you rename them and or delete them, and you fire up AutoCAD the next time, it will recreate all that stuff and you'll get a fresh clean profile.

Number 26, disabling InfoCenter or Communication Center. I'm not saying everybody should do this, but you may want to because of your company restrictions. At one time they had links to Facebook and Twitter in this thing. You guys know what I'm talking about? It's a little bar up at the top right hand corner in the title bar of AutoCAD.

It does give you access to some help documents, things like that for searching help, but it also can be a internet hog. If your users are clicking things in there and they're going out and finding these things, and you may or may not want users to have access to that. So if you don't there will be a link in the handout right here, show you how to do it for 2017.

If you've got earlier versions it's generally the same process. Just Google it and you'll find it, it's not that hard to find. The only difference would be the actual location in the registry of where you would go in and make that change. Unfortunately they don't provide a way to do that in the user interface.

Frank and Sam sent me a few little things that they thought were helpful. I don't know if you

these guys, they're some of the-- one of-- let's go through the list real quick. The five or show the full path in the title bar.

If you probably know where this is, you go to options, open and save tab, display full path. That way if you remote into their machine, or you're sitting at their desk, whatever, you can just quickly look in the title bar to see what drawing they're working on, make sure they didn't copy it to their local drive, or something like that. It's going to show the full path up at the top.

If you have a company menu, let's say you're Jones Engineering, or whatever. Don't name your company menu tools or custom. You walk up to the machine again, you don't know if that's your tools, your custom, or theirs, or something else. Name maybe name your menu Jones or something like that if that's your company name. Walk up to the machine, you see what the user is doing, you instantly know you have the right-- they have the right menu loaded.

The MODEMACRO string that's down in the bottom where the coordinates are usually shown in the system, the status bar. It's going to require a little code to do that, but you can make that thing show things such as a profile name, or basically any system variable. You can have the MODEMACRO string show you that.

So when you walk up, again-- these guys were talking about going to see a user's machine, or remoting in, they want to instantly see, is this guy running the right profile? Does he have the right menu loaded? Things like that.

Same for a custom About command. If you know how to program model list, or anything like that, you can write a-- I'm going back to my Jones example-- Jones About, something like that. Maybe you have it pop up and tell you, is this the right menu they have loaded, the right profile? If you have different versions of those files, so.

And the last one was showing-- I'm sorry, store your tool palettes in a location that is read-only for everybody else, and write for you. If more than one person has access to the tool palettes, or write access, the last person out wins. Meaning whoever the last person is to close that AutoCAD that day, whatever their tool palettes are will get written back to that network location for your tool palettes.

You guys are really ready to go to that party now, right? How many guys, how many of you use Remote Assistance? How many of your users actually hit you up for Remote Assistance?

Not too many.

There are other tools out there for doing that. I think we use one called LogMeIn, things like that. If I just need to go in and see what are users doing, they have a small problem, it's not-- I will use this, and this is a way to push Remote Assistance, meaning you're going to push it on them. You don't have to wait for them to send you a request. You go in there to your, either the Windows search bar at the bottom when you hit the start button, or in a DOS window, whatever, you hit MSRA forward slash offerRA and the machine name. And you'll get this dialog that's shown here.

It's scanning. At this moment it's scanning that machine for the logged on users. Usually there's only one logged on user. The next screen, I don't have it up here, but it will be a connect button. They will see on their display so and so wants to connect.

Of course the next screen after that is Joe CAD Manager wants to drive your machine, and you're onto him. We went through a phase where we were trying to get users to send those to us, those requests. And it was just too complex, so we started doing this where we just push it on them. Like I said, there's other tools out there, but if you don't have any of those other tools, this is one that's built into Windows.

This is one I should've used at the very beginning, because it would be fun to show it. Let me jump back over here. Does anybody know what this tool is, ZoomIT?

If you do any kind of training sessions, or any kind of things like I'm up here doing today, this thing loads down in the tray. You can right click, and one of the features is you can just draw on your screen. So you want to point something out. What it's actually doing in the background is making a screenshot of your screen, and it's letting you draw on it. And when you get done you just hit escape, and that's it.

Except I just hit the power button.

[LAUGHTER]

**RK MCSWAIN:** It's, like, right next to the Escape button. Boom. How about that? It was quick. I planned that.

It's got some other functions where you can have a-- come on, get back up there. You can do typing right on the screen. It has a break function where you start it, and it's got a little timer. If you're going on break, let's say you want to have users do something, this is useful if you're

doing any kind of training, or anything like that.

And it does a zooming function, which I'm not going to illustrate on here, because when I tried it on a project the last time, it freaked the projector out. But it will let you zoom in to an area on the screen. Hopefully you would have better luck if you're doing a projector for yourself.

And the last one. How many of you go to your users' workstations, and they've got post-it notes all over the desks, the monitor, with things like file DIA and all those things on it? So this is kind of just a suggestion. Find out what all these things are that the users want to remember. They're writing it down on post-it notes, because they don't access it often enough that they can remember it. But they want to be able to hit it up next time.

So the suggestion is, maybe, get some cards, eight by five, something like that, and write all these things down for them. Make it look nice, get it laminated, hand them out at your next little CAD lunch and learn. They will hopefully appreciate it, and like what you're doing for them. We have five minutes

[APPLAUSE]

**RK MCSWAIN:** If anybody-- oh, go ahead. Thank you, thank you, thank you.

[APPLAUSE]