ROBERT GREEN: So welcome. How's it going so far for, everyone?

AUDIENCE: Good.

ROBERT GREEN: Good, pretty good. So in their infinite wisdom, they send everybody down to have lunch, and then they schedule 90 minute classes right after lunch. They pack everybody nice and close in a warm room, so yeah, let's see what we can do to keep people awake. So my name's Robert Green. Most people I guess know me from the CAD management stuff I've done for *Cadalyst* magazine over the years-- CAD manager. Let me throw my bio slide up there real quick. Just basically a mechanical engineer who was dumb enough to raise his hand, and volunteer to be the CAD manager one year, a long time ago, and the rest is history. Been doing this independently since 1991. It's my 21st AU.

So I maintained a couple of resources for-- how many of you are the CAD manager? Pretty high correlation. So I maintained some resources for CAD managers. I've got a Facebook group. There's my website and feel free to email me. I'll not send you any SPAM or nonsense, I promise. I'm always happy to hear from you.

So the topic for the day is training videos, making your own training resources, and we're going to go through a variety of different approaches to that-- highlighting, of course, video technology and video technology delivery. So we got a few more people coming in, so there's some stuff here. There's one in the front up there. Make yourself at home.

So let me just go ahead and ask before we dig in. How many of you are doing some sort of video tips and tricks or tutorials at present? That's a pretty high correlation. So what are you looking for? To how to get better at it? Streamline the process? Optimize it? How many of you have not done anything with video technology at all? Maybe a little less than half room. OK.

So I may adjust the pacing or go through a couple of sections a little quicker or slower, depending on that. Now let me turn this around just where I could see it a tiche better. First things first. I'm just going to go ahead and say this. Just because we get into video training or a technology enabled training methodology doesn't relieve us of the burden of delivering good training in the first place, I've seen stuff that's produced flawlessly that really has crappy content, and it's still pretty much crappy training even though it's delivered in a very technologically smart way.

The flip side of that is I've seen great content where the person really didn't plan, they didn't think about how the video was going to be recorded, what kind of quality was going to be required. And unfortunately, because they didn't do the homework first, that message gets obscured in a very poor technical delivery. So I want to address both pieces of this as we go through. So we're going to look at the whole infrastructure of getting set up, tips and tricks for getting your training done better, messaging, how to become a better instructor-- just a whole bunch of stuff. So my hope is-- and by the way, this is just stuff I've learned by trial and error. It's nothing magic-- just things that I've done through my practice for years and years. My hope is that everyone will get a few things that they can walk out of here and utilize when you get home. So we'll talk here in about, I don't know, 88 minutes and we'll see how I did.

What I think videos our best for, really, is just simply people really do want you to show them how to use the software. They don't really like to read books. How many of you have spent months and hours and hours of effort putting together guides and paper-based things that nobody reads anyhow? This is where all the hands go up. So you might as well just go ahead and show them.

One of the really advantages to it is if you put video in front of somebody, it really allows them to go through it at their own pace, their own speed. And here's the real secret to adult learning. How many of you like to try to learn something in public and then fail in front of someone else? Look around and note the abject lack of hands. As adults, we like to learn things on our own time in private, so that we can master them at our own speed and become competent as we learn. And this is what video really does. I think at the end of the day that's why it's been so well accepted.

There are some burdens that have come along with it. How many of you have gone into YouTube and found exactly what you're looking for, but it takes three minutes and you're like, come on, get to the point, get to the point, get to the point. I mean it has really lowered our attention span for trying to learn things. So the pressure is on us to deliver content and fairly quickly.

One of the other things I love about it is I never run the same training class twice. I was talking to somebody earlier. That's one of my main things about recording training. And I don't want to have to repeat myself. So any time I'm doing training, I'm recording it. So this means I'm no longer having to run the same training sessions over and over, and I'm thinking about

standards processes, project kick-offs, things like that that would typically have to be repeated.

However, people are not going to re-watch or they're not going to enjoy it if it is not well-thought out, well put together, and well-produced in the first place. Just because it's video based doesn't mean you don't have to produce good material. So that means that there's a whole raft of things that you have to do to get prepared to do this well, in my experience anyway. And what I'm trying to do is put this in a chronological order, so that you can worry about things in detail in the right order. And so not coincidentally, hardware will tend to poke up first, because that's the stuff that takes longer to buy than anything else, at least in my experience.

But I would say first things first is, if you're going to start a video-based training methodology, what are you going to start teaching people? Let me get some of your ideas. Where have you guys started?

AUDIENCE: [INAUDIBLE]

ROBERT GREEN: Software-based training, software features.

AUDIENCE: New employee orientation.

ROBERT GREEN: New employee orientation. I like that.

AUDIENCE: Standards.

ROBERT GREEN: Standards, I like it.

AUDIENCE: How to build something.

ROBERT GREEN: How to what?

AUDIENCE: Construct something.

ROBERT GREEN: How to construct-- so it's a method or a work procedure. What I like already is that I'm hearing stuff that's unique to your company. What I'm not spending a lot of time doing is creating a 400-video series on how do you use AutoCAD, because I can buy those. Those are available. What I would like to focus your attention on is doing this stuff like you just said, which is unique and peculiar to your environment-- stuff that only you can teach, stuff that you can't go by somewhere else.

So our first video projects really should be stuff it's pretty quick to the point. I don't want to try and produce a two hour training suite of videos as my first project. I'd rather produce a few five minute things as my first projects. Screen may flicker for a second here. I'm just dealing with that thing shooting in my eye.

It should be something that you feel very confident instructing. So for CAD managers, that's usually stuff like standards, software functionalities, these are things that you do and describe every day. If you think about it, don't you guys individually mentor CAD users a lot? On a day-to-day basis, you're at people's desks describing how to do things? You are a natural instructor, but you have a peculiar one-on-one talkative, mentoring type, instructional style typically. That's where most of us come from. And I would encourage you to leverage that.

If you go into a video trying to teach in a way you're not comfortable with, it will show up. You'll hear it. It won't seem natural and people really won't be that interested in watching it. So using your natural voice.

Produce your first few training topics on things that people need. And by that, I mean what are they having troubles with. So look at the question that you answer the most often. Or put in another way, what question do people ask you that makes you cuss immediately? Those are your first training topics, because those are the things you'd really like to be rid of . If people are asking it over and over, clearly there's a reason they're confused. It must require some training.

Something that's show and tell focused. So a lot of the times the things that I have the most success with are the things that I usually have to go by somebody's machine and show them, or walk them through. That's the stuff that translates to video very well. If you do these kinds of things, identify these types of topics, I bet your first video projects are going to go over well and be a success.

So some suggestions, and we heard a few of them, anything that's peculiar to your standards, your standard work methods, your standard work processes. As a CAD manager-- well let me ask, let me back up. How many people who always follow the standard, never screw anything up? Look. There's one.

AUDIENCE: [INAUDIBLE]

ROBERT GREEN: Who's a problem or who does it right?

AUDIENCE: Who does it right.

ROBERT GREEN: There's one-- yeah. Oh, wait, are you telling people don't follow the standards? Is that what you're telling me? You know what? A lot of times I find that people don't follow the standards because, honestly, they really haven't been trained all that well on them. Let's look at ourself in the mirror here for just a moment.

So if I expect somebody to actually plot or let's say to capture a PDF collection of documents in a certain way, have you ever found yourself guilty of going by the user's machine and say, here, OK, for the 44 time, you do this, and this, and this, and this, and this, and this, and this, and this, and this, and this, and you run through 18 steps and you walk away. Now how long does that person remember those 18 steps? You're not even down the hall before they forgot. So this is basically the way that we would document that work process. I'm going to do that in a video manner, so that they can watch it over and over again.

I'm a particular fan of project kick-off meetings. Record those. Plotting/printing-- fantastic. That's one of the things that pops up quite a lot. Something that people had troubles with, something that they would want to watch in order to help them solve their own problem. That's the stuff I'm going to focus on first.

Now once you have an idea what you're going to do, you have to get your technology and your video infrastructure ready. And even though some of you are already done this, I'm going to give you some ideas for how to get set up, at least in a way that works for me. So there's hardware, there's software to think about, there's accessories to think about, there's how to get your recording environment configured in order to get your best results. Output formats, how are you going to deliver things? Is it going to be in 720? Is it going to be 1080? Is it going to be optimized for tablets, portables? All these types of things it's what you have to think about.

And what I've definitely found is, if you don't sweat these details up front, you'll record training stuff, and then you'll find out that you built an error into it that can't be overcome, and you'll have to go redo them. Has anybody had this problem, because I've seen some heads nod. So I kind of want to run through a lot of that stuff.

So let's go ahead and just get started. And I'll breeze through this quick. If anybody wants to ask anything, or have me slow down, feel free to do so. General rule-- if your machine runs

CAD well, it's probably going to run a video capture utility well anyway. If you want to do a lot of video mastering or editing, you may need some higher power stuff. But for most of us, probably not.

If your CAD runs well, you'll be able to support video recording as you're running the software. You may notice your machine slow down a little bit, because video recording software does spool to the disk quite a lot. And solid state disks are very useful to accommodate that. If your CAD doesn't really particularly run well in the first place, it's going to run a lot worse when you try to run video recording stuff at the same time.

Why do I even say, because that just sounds stupid? You go into these training rooms and they got an eight-year-old dual core Dell 8200 that you've got to hit F3 to get the hard drive to start every time you boot it. I see stuff like that, and it really doesn't like running Camtasia or stuff real well. So you know, if it doesn't run CAD real well, it's probably not going to work real well. Obviously, anything you can do to beef up your cores or your RAM on your machine is only going to help. But bottom line, if you had a good, healthy CAD machine, you're probably good to go-- a lot less trouble than it used to be.

I'll just say this. Over the years, I use Camtasia, which I'll give you some recommendations on that. I've done that all the way from way back in XP with 2 Gig, all the way up to the most hot shot stuff that we've got available right now, run it on a variety of operating systems, platforms, seems to run pretty well almost no matter what. We got-- no, I thought there was something open over there, but there's not. Yeah, there's a couple over there against the wall.

All right. I'm going to continue. What I would say though is if you do have a slower, lower-end machine, before you do any kind of video recording, pretty much kill any processes on the machine that you can kill before you start. Turn off your wireless receiver, get the internet service out of there, dismiss your email client. Just get anything out of memory that you possibly can and it will run better.

You definitely want to pre-load your CAD files and get all that stuff cached, so that you don't see a lot of hard drive swapping as you move through things, especially if you have multiple files that are loaded. And a big thing that I have noticed problems with is, especially if you train with a laptop, which I do quite a lot, is if the laptop hibernates, you can sometimes get real glitchy behavior when it comes back up from hibernation. So I'm a big believer in reboot your machine before you do any training recordings-- word to the wise. So strip your machine down

and get it running, hopefully the video recording utility and the CAD, and that's pretty much all. That will give you the best recording environment that you can get.

Operating system wise. Let me just say a couple of things there, because it's thankfully gotten somewhat simpler. I don't really think from a recording point of view, I don't really think the operating systems matter anymore whether you're in Windows 7, or 8, or 10, it pretty much runs. Now we can make the argument that if you're doing a lot of really high-end rendering production, you're editing things, you're doing audio voiceovers, now you've got to worry about audio codecs, you've got to worry about how quickly can the graphics card deal with this. Now you might start having driver issues and your operating system might start to become more of an issue.

Let your CAD programs dictate your operating system. How many of you are still all Windows 7 on all your desktop stuff in the office? Most of you. Any Windows 10? A decent bit. OK. Video recording, it pretty much works. Windows 7 is the lion's share of what I see, Windows 10 being secondary, and it all seems to work pretty well. If you do have a lot of audio stuff that you do, which I'll talk a little bit more about that later, than just let the audio devices dictate your operating system. And generally, that tends to push you back to an older operating system is what I've observed. So most of the stuff I have still works flawlessly in 7, it can be problematic getting it to work in 10 sometimes.

For production, rendering things out, cranking out videos in different formats, et cetera, that's where you need a beefier machine. And solid state disks mean a lot. The operating system wise, I still think Windows 7, I have fewer problems with that than I do with 10 on my machines. I do all my video post-production on a Windows 7 64-bit machine. Mac is problematic, particularly if you're trying to run any sort of Windows emulation on a Mac, I would stay miles, and miles, and miles away from that. Most of the stuff we're capturing is on a Windows-based platform, because we're CAD people, so I would tend to keep it there.

The one thing I would say, though, is that the new reiteration of Camtasia that's just come out, also runs same format, same native formats on the Mac, so it may be getting better. But I've not had a chance to work with it enough to say that yet. Load these machines up, lots and lots of RAM. SSDs make a big difference. So bottom line is, you can record with older hardware, but you do the production stuff with the higher-end hardware.

Let's talk a little bit about what software you might use to record. So how many of you are

Camtasia users? A good chunk of the room. How many of you are screencast users? Not nearly as much. Anybody using Jing? What have I missed?

AUDIENCE: Captivate.

ROBERT GREEN: OK. Yeah there's a bunch of utilities out there. I had to pick the three that I see in the field more than anything else. By far most people that I talk to are using this application for video capture and editing. It's called Camtasia. It's by a company called TechSmith. The thing I like about it's not real persnickety about graphics or hardware, it pretty much just works, which is-- I'm not a video editor. That's not what I do for a living. So I like software that just loads up and runs.

It is extremely strong in terms of supporting virtually any kind of format you could possibly think of. It'll pull in video from all different types of sources, it'll write it back out to all different kinds of formats. It makes it very easy to edit things. It's a wonderfully capable editing suite. Really, seriously, I've been using it for a long time. I don't make money, because you buy it. It just works.

They have an extensive library of assets and effects, so things like being able to flip screens, transition from one to another, voiceovers, fade-ins, fade-outs-- stuff that really looks like what you're doing, even though you don't. It's very easy to do with that software. With the new version, they've gone to something that's pretty cool, which is the video format that you record in works exactly the same way from Windows platforms to Mac platforms. And this is the only tool I'm aware of that does that. Because up until now, it's been-- it's a Windows machine or it's a Mac machine, and never the two shall meet. But at this point, we really do have one tool that unifies the formats.

It does cost $199, but for what it does, it's dirt cheap. Really is. I see some heads nodding. You guys like it who are using it? Works pretty well. There's the URL, so techsmith.com/camtasia. And you can get a fully functional trial version of it and just check it out, see if you like it.

There's another product that TechSmith does that's called Jing, and this is worth mentioning. Again, no special graphics card. You basically download a little app that installs onto your machine and enables the ability to capture the video. So you got hot key, and it captures the video format. The only limitation is that it has is it can only record short duration, so like four to seven minutes tops. But if you're doing real quick, little technical tips and tricks, that may be all

you need.

Another thing it's really good for is I like to have all my users have Jing on their machine, so when they call with that on diagnosable problem on their machine, I just say, do me a favor, just turn Jing on, and send me the link to the recording. And then I can actually see what's going on in their machine, which is pretty cool from a tech support point of view. You can't beat the price, because it's free. And it just pushes the video up to a website, publishes it, and then gives you a link, which you can then email to somebody else.

Then obviously, if you think about it, you could aggregate all those links and you could build yourself a Jing library easy enough. There is a more full-featured version of it, that you could pay a little bit of money for, which increases your duration and gives you some additional editing flexibility. But for just capturing little tips, tricks, four to seven minute videos, this is actually a pretty neat tool. And you can't beat the price. There's the URL for it there-- techsmith.com/jing.

And the other one that I see quite a lot out in the field now is Screencast. And I noticed there were several people raise their hands for that. This is a utility that Autodesk brought out of the labs. It was a free trial, utility type of tool, and has actually been productized in recent years. Basically, it just runs resident on your machine. So as you're running CAD, Screencast is sitting there eavesdropping and capturing your video. So it's tightly integrated with several Autodesk tools-- not all of them, but quite a lot of them.

One of the very cool capabilities of it is that as it runs, it actually understands what command is being issued from the software, and it records that. It puts a little timeline down below, so you can actually see, or the user can see, at this time, this command was clicked-- just pretty slick. The downside to it is that, if you wanted to do a more generic video for like how do we fill out our time sheets, Screencast isn't going to do that, because it's tied to the Autodesk infrastructure.

It's pretty very limited in terms of editing. About at all you can do is just really snip out little chunks. Like if you made a really gross error, you could cut that out, but that would be about it. In terms of doing voiceover or really good substantial video editing, not really. And there's the URL for it. So screencast.autodesk.com. To me, these are the three things that I see out in the field more than anything else. Go have a look. For those of you who are already knee deep in a training program, you've already made your decision, so you'll probably stick with what

you've got, but I just at least wanted to mention those three options.

AUDIENCE: Quick question.

ROBERT GREEN: Yes?

AUDIENCE: You know Camtasia, but would you use Screencast to capture, then send it into Camtasia for further editing, voiceover.

ROBERT GREEN: Well, in theory-- his question was, could I do something in Screencast and then pull that into some sort of a post-production tool, like Camtasia, to mess with it. Screencast pushes up online by default, but you can export or draw it down, an MP4 file from it, if you want. The problem is, once it gets into Camtasia, the video and the audio is spliced together. They're not-- you can't treat them as independent tracks. So your ability to edit is quite limited.

If all you're going to do is produced CAD tips and tricks on Autodesk tools, and that's all you're ever going to do, then Screencast would be a really excellent choice for that task. If you feel like you're going to be doing more editing and stuff downstream, these are kind of a few things I was going to say.

The recording format that you choose now will have profound implications on what you can do later. Like if you choose-- you know, we're going to move forward with Jing right now, then know that you're only going to do four to seven minute segments, know that you're going to be restricted to only capturing at the resolution of the desktop, know that your ability to export from that system is going to be very limited, know that your ability to edit those downstream is going to be extremely limited. Nobody goes into this thinking they're going to be a video editor, but over a couple of years it's funny how that happens.

So you're trying to consider, not only do I need to do now, but what might I need to do down the road. I think if you're going to be CAD centric, totally CAD centric, nothing else, I think Screencast is a pretty good choice. It does have the limiting editing functions that we talked about. The one thing that I would always say is, our software is going to change, technology is going to change, video formats are going to change-- don't believe me, what kind of monitor were you looking at 20 years ago? Think about it, stuff changes. Is the software going to keep up with it?

And so far, I've seen a lot of freeware stuff. I've seen some great tools that were clearly hijacked from someplace that were sued and put out of business over the years. Camtasia

endures, Screencast endures. So those tools seem to be modernized and kept up with.

I would say that the more that you edit, and rework, and repackage these things, the more Camtasia is indicated. And I know nobody likes to spend $200 on a utility, and nobody wants to learn another software package. However, if you're going to be doing a lot of video work, you might as well go ahead and take the plunge, and get into Camtasia, and learn it at this point. That's my recommendation.

OK so getting into some accessories and things like that for getting your environment set up. How many of you have seen a really, pretty cool training video that sounds like it was recorded in the back of a bus, or in somebody's spare room with their dog barking, or the UPS guy, or the doorbell ringing, or over a cell phone? It's video, it's all about showing people something, so what does that have to do with audio? Well, you know it's really not an audio problem, but if the audio is really bad, it will detract from your video, believe it or not. So it's actually pretty simple and pretty cheap to get a fairly nice little audio setup for your recording rig.

And here's what I would recommend. Get yourself a decent you USB style microphone. So if you put on a headset microphone, and you follow the cord down to the end, and you see one of those little 1/8 things like you plug-in to the end of your iPhone, that's not what you want. And you want to a nice, high definition, USB microphone. The thing will actually sound good.

You'll want a decent pair of headphones, isolating headphones, so that you can actually hear what's going into the video. And I'll give you some suggested stuff for this in a minute. If you really want to splurge a little bit, like $100, get yourself a decent desktop microphone. It looks like a radio announcer's microphone. And those are better still. Get yourself a pop filter, which I'll show you a picture of that. And get yourself a good pair of desktop speakers, so that you can listen back to the video and hear everything that's in that video.

So I worked on a project three years ago, God's honest truth. Some guy had sent this in, and I guess he just been listening to it on his computer speakers, but when you listen to it with a nice, full range, high fidelity pair of speakers, you could tell the guy burped in the middle of the video. Plain as day. I don't know why he sent that in. But if he'd really listen to it well, he would have heard that.

I like to use high performance in-ear stuff for monitoring. And nice to have is if you have a wireless microphone, you can actually record yourself in-live training environments, just like

they're doing with me right now back on that machine. So everything's being recorded.

Now let me go ahead and run you through what I use. For a desktop microphone, this Blue Yeti Is just the best thing since sliced bread. It's about $100 and from time to time, they'll have a little deal where they'll include that pop filter with it. That pop filter just goes in front of there, so that the P's and T's don't really overpower the audio that's going in there. These things are fantastic. That's personally what I use.

A nice pair of Skull Candy, in-ear monitors, which I use for listening. And this thing is great, it's called a MudGuard. It goes behind your desktop microphone. So that when the UPS guy rings your doorbell, or your dog barks, or whatever, that sound doesn't get into your microphone. That will save you many repeated takes if you're trying to do good quality voice stuff on your videos. Can't recommend that highly enough. You got a nice pair of Sennheiser over-ear microphones, and I got a Sennheiser wireless box. So I can throw that thing in my briefcase, go out, do a training thing, you just plug it into my machine, and I'm good to go.

Everything that I just went through would total up to about $700. And if you leave the wireless mic right there off of it, it's about 300. So it's not a whole lot really. And the difference in sound you'll get is unbelievable-- will really make you sound professional. I recommend it.

Let's get set up, OK, ready to record. So on your desk, here's what I do. Whenever you put a pair of speakers on your desk, understand that they're sonically coupled to the desk. So they'll make your microphone vibrate, or they'll make your computer vibrate. Put a mouse pad underneath your speakers, tip number one. That way, you won't get any vibration or feedback.

Put a mouse pad underneath your microphone, that Blue Yeti microphone that I showed you, again, so that no vibrations get transmitted to that. And you would not think that just moving your mouse, around and clicking the button would get transmitted through that microphone, but it really does, especially on a hard desktop surface. You can hear it. Whoops, wrong direction.

Put your windscreen or pop filter in front of your desktop mic. Put in your headphones, so that you can actually hear what you're saying and doing, and you're pretty much way to go. The other thing that I like to have is I've got one of those stenographers copy clips. So if I have any notes or anything that I want to read, I could put it right up next to the monitor and read off of it, instead of fumbling and looking down, or trying to handle notes, because that will create noise that will get picked up. Can you tell I've had to start over a bunch of times? This is every

mistake that I've ever made.

The environment should be a relatively quiet, relatively, shut off place where strained noise doesn't come in all the time. It could be at your desk, but mute your phone would be an example. A shared cube in the middle of a common work area at 2:30 on Thursday afternoon is not a place you want to record videos. You'll never get through two minutes of doing anything.

Don't record in a lunch room, because it echoes like hell. You can hear it in here. Yeah, it's really not that good a place to be recording something. A comfortable, non-squeaky chair-- I've heard so many videos where you can hear the person's chair. And I see people laughing, so you've heard it too. If you like to wear bracelets or jewelry or stuff, take that off, especially if you have a hard desk because you really hear that. So there there's just all little things to be aware of. You want it nice, quiet, clean, sonic environment that you can record in.

I'm real superstitious. So what I do is I plug everything into the machine, I get it working, I think I have it working. And then I will take everything-- well, I'll just run through my checklist. Was my microphone actually found? Is it actually recording? Does it actually play back through the speakers it's supposed to play back through? So we're just checking everything about our configuration.

Make sure that all your devices are set to default, your volume is set at an appropriate level, so that you can hear things. And then to truly test it after all that is set, shut your machine down, bring it back up, and tell me if it still works. If you can do that a couple of times, I believe you, your configuration is valid. But I've had so many times where I didn't do a full reboot test on it, and I get out to a place, and I've got a hardware problem or a driver problem. So it pays to be superstitious. Definitely reboot, try and try again. OK.

Do this and you're going to have a fairly good environment where you can record the video and high quality audio, and your stuff's going to look good, and it's going to sound good, and that's the goal.

AUDIENCE: I have a suggestion to make?

ROBERT GREEN: Yes?

AUDIENCE: [INAUDIBLE] once you have everything set up, take a capture of 10 seconds. And then say it,

play it back to yourself, because sometimes you go for an hour and you find out [INAUDIBLE]

ROBERT GREEN: Yep, his point is do a quick 10, 15 second record moving the mouse around, saying testing, testing, and play it back. Excellent. Because you're right, you could record your whole training thing and it didn't work. Yep, good point.

OK, let's just talk a little bit about when we get our software fired up, and we're ready to record our stuff, there's a couple of-- you think it's real easy. Oh, I'm just going to record what's on screen. True, but what if you have a real high-end CAD machine that's at super high resolution, and you record at that super high resolution, and now you want to produce it so that somebody can watch it on an iPad. What's going to happen?

It's going to get shrunk down, and it's either going to be so small that it's not readable, or it's going to be pixilated and not readable. So what we really have to think about is, who is going to be consuming this information? And we have to do our recording in such the way that I tend to record at the resolutions that are very close to how the information is going to be consumed. So I would argue that, for the most part, I'm recording at 720, not full HD, but HD. That's more often than not the resolution that I'm recording my CAD applications at.

So I'll basically get my CAD application and size it, and get that set so that I get a 1280, 720 resolution. And then I'll record there. The applications that you're going to be running, like Screencast, I'm pretty sure that goes to-- I want to say that goes to 1200 by 800, or 1280 by 100, because it records the toolbar down on the bottom. So it captures those extra 80 pixels that are down at the bottom of the screen.

AUDIENCE: [INAUDIBLE]

ROBERT GREEN: Yeah.

AUDIENCE: That'll do it for you.

ROBERT GREEN: Yeah, and it wants to go ahead and scale your CAD window to that, default out of the box. Camtasia, it has all those kind of presets, too. So it's pretty easy to just click down and select the one that you want to use. And you just get your CAD windows scaled appropriately, and that's how you record. Feel free to record at full HD. Just understand that as you squeeze that down on the iPads, it's not going to look as good. So 720 just kind of seems to be the Goldilocks zone, and I tend to record most of my stuff right about there. So there you go.

Please note that older iPads, which are still quite a lot of them in use, do not have a 16:10 aspect ratio. They're at 1028 by 768 aspect ratio, which means you're probably going to get black bars down the side, or you're going to get black bars on the top. It's unavoidable. I wish people would standardized this stuff. Then just scale your CAD application to match that resolution, and the goal is just to record in common industry standard resolutions, if you will, so that your outputs will be easy to produce.

Audio wise. Make sure the audio is on. I see that mistake made a lot. You think I've ever done that? Yeah, certainly have. Most of these applications, even if you go into, in this particular case, we've got Camtasia showing us. It has a little microscope, a little micrometer over here. So as you talk into the mic, you'll see it kind of bounce up and down. You can go to your control panel and look at the windows record interface to do the same thing. Just make sure that it's actually seeing audio and recording.

What I would recommend is when you record the device, you'll have a control panel that says what you're using to record, which is my microphone. And then it will allow you to set the format in which you are recording. And I recommend you use 22 Kilohertz, 16 bit, mono. That's real specific. That's substantially better than a low-end MP3 file. It sounds like you're talking on a good, quality phone. It's the best compromise between good sound and compact file size. So feel free to go higher if you want. You're just narrating, there's no reason to use stereo. So there you go. 22 Kilohertz, 16 bit, mono-- kind of gets you the best sound to file size ratio. Yes?

AUDIENCE: One mistake I made one time was I was on online meeting, and I had to record with Camtasia, and I didn't turn on my system audio. So I could hear everything I saying in the microphone, but nobody else [INAUDIBLE].

ROBERT GREEN: Nobody else, yeah.

AUDIENCE: Remember that system audio is a separate setting, and it's not right out in front.

ROBERT GREEN: Yeah, it's a good point. Yep. And then these tools can also record-- or Camtasia anyway can record other things that are going through your system. Like, if you bad mouse click, error, ding, it's recording that too. And if you have an audible notifier, say, for your email, so you're going through doing a nice video, and ding, and your email client pops up or something. So probably want to have all that stuff turned off.

Later on when we render, what we want to do is have file sizes that are of the smallest, workable resolution with the most compact workable audio, because that'll give us the smallest file size, which will render and produce faster later, which makes sense. Our resolutions we'll be right. Sound files will be compact. Everything will run faster, and faster is typically pretty good. OK.

Let's talk a little bit about some things that you can do with these tools, at least Screencast and Camtasia, you can both do with these tools, which is you're recording the application. So you're showing what you're doing on a CAD application. And you're talking to them, but they're not seeing you. So they're really not able to see exactly what you're doing or are you moving the mouse, they really can't tell. So what these applications do is they give you a way to use these adjunct annotation capabilities, and mainly it's around visual clicks and picks, which is just pretty cool.

Screencast actually records the clicks and picks down at the bottom, so it's really easy for people to see when a mouse button is clicked. Camtasia does it with little colored dots. So if you do a left-click on the mouse, you see a little mouse cursor moving around, and you see a little like a yellow flash, or a red flash if it's a right click. And those are pretty neat. They're basically being recorded as you record anyway. Later when you produce the video, you can decide whether you want them to be visible or not. So I just point out that it's there, it's being recorded in history.

I'm a fan of them. I'm not a fan of them being real huge and glaring on the screen, so I dial the size of them down compact. But that's nice. People are very clear that it's a left click or contextual right click, and it's easy for them to see what you actually did on the mouse. And that way you don't have to say, I'm clicking the left button, I'm clicking the right button. Yes?

AUDIENCE: Can you edit the size, and color, and everything after the recording?

ROBERT GREEN: Yes, yes. In Camtasia, yes. The audio thing, also, they have a capability where you hear a slight little click, real subtle little like a knock, and I'm also a fan of that too. You probably just, if you're like me, you like to turn the volume that way down though. Don't want it be real obnoxious and loud, but that that's good. And in doing these over the years, the feedback I've gotten from users has been they like these. The visual audible mic clicks. So just to let you know that that's there and that they can be configured.

This will cut down your talk track on your video segments a lot more than you think, because if

you don't have to say, I come over here, I left click, now right click the mouse, now left click, now scroll down, left click, then right. If you're not saying that, your video is moving a lot quicker, and the little yellow and red dots are doing the talking for you. So I'm a fan. It's allowed me to get my stuff produced faster.

What you do want to do is put a disclaimer in when you start your video you just say, as you watch the video segment today, you're going to notice a little yellow and red balls, and some little audible clicks, and this is how you'll know when we're clicking the mouse. So just spend 10 seconds doing that later. And they can always be turned off. So if you don't like them, you can rerun your video production later, turn them off, they're gone. Costs you nothing to experiment with it. I think you'll be a fan of them if you try them.

Where I think I am now, and after you get your stuff set up, and you know your mics plugged in, and all that, and you noodle around, and try a few test things, now what I want to do is start creating some real video stuff. So now, I'm going to kind of transition the presentation into techniques, processes, best practices, and things that I use to get the best video content. And a lot of this also has to do with being an effective presenter and trainer I think. How many of you do instructor-led training at your place? So it's pretty high. Cool. Do you enjoy that by the way? Yes.

AUDIENCE: It's nice getting instant feedback.

ROBERT GREEN: One thing I learned is you can never make everybody happy, ever. OK, so I want to talk to you first about the concept of story boarding, what you're going to create. And what I'll just say is, don't make a great video of a bad training class. What story boarding does is that allows me to conceptualize how am I going to explain this, what demo files am I going to use, what sequence am I going to use. How am I going to explain it? How am I going to tell the story?

And here's the really good news I think for most of us, since for real CAD focused, and we're really used to walking up to somebody's desk, and saying here, let me show you. I really want you to use that mindset. It's something you already do and you're already good at, leverage it. Remember, when you produce these videos, they're going out to an individual who's watching them. So it should probably sound like an individual mentoring session. It shouldn't sound like you're lecturing 1,000 people at AU. It should sound like you're talking to somebody at their desk, and this is something that we're already good at. So all I'm really saying here is, let's get organized first.

What a story board is, it's just a summation of what I'm going to do like this. The job in this is going to be to explain how we're going to use the new [INAUDIBLE] plotter that we installed last week. Here's a quick video tutorial on how to find it, how to make sure that you've got AutoCAD pointed to it, whatever that may be. So define the goal, define what it is that you're going to explain, define what you're going to need to do. Like, in order to do this, do you have to know where the new page setups and that configuration shortcuts are. So you're going to need some demo files. You're making a mental checklist of what am I going to need to explain this, what am I going to show. And then I'm going to run you through how to crank an example plot out to this. So that's what we're going to do.

Once you have this laid in, you could probably figure out exactly how you're going to do it. And I would suggest at this point, you just do a real quick, little dry run rehearsal just to yourself. And when I do and I look like-- you'll get comfortable with it after a while, but you'll feel really self-conscious at first, is when I run through these, I actually talk just as if you know somebody is sitting there. You'll have people walk in on you at the office and go, who are you talking to? You'll get used to it in a while.

So basically, what I'm going to do is have a blocked layout of exactly what my training video is going to do. I'm going to have my example file set up, I'm going to have a game plan. I'm not just going to try to start recording without an idea of where I'm going, because that's how you spend 28 takes, that's how you spend eight hours getting a four-minute video. If you do this first, you'll get from concept to finish video quite a lot faster, or at least I will.

It will help you collect your thoughts. It'll help you get a process in place, a logical flow. It will definitely help you create a course guide later if you want to commit this to paper, and I'll show you how I do that. The more you the more confident you are in this now, the more that confidence will come through on the video you record, and the fewer the number of takes it'll take you to get it right.

Now here's-- I'm a extremely big believer in that you don't practice, and practice, and practice 8 times and then record it. What you do is you record it five times until you get it right. So the rehearsal that I do for creating a video is, surprise, I create a video. I want to replicate the entire process in rehearsal and there's some benefits to that, which I'll hear in a moment.

I like to use the approach I call talking it through. The good news is, we all do this anyhow. So if you had to go explain how to send something to the new plotter, and you walked over to a

user's desk and showed them one on one, that is exactly how I want your training video to go. So what I will do is I'll get my example files ready, I'll load my CAD application up, I will turn on my recording utility, whether that's Screencast, or Camtasia, or Jing, whatever it is, and I will now go from the top no stopping, just go. Exactly like it were live. If you mess up, don't worry, keep going. It'll get better the more times you try it.

So just pretend like you're tutoring somebody, record it, and as soon as you get done, press the hot key. What you've now got is a five or six minute video recording that's your first draft, your first video draft. Now what's the painful part that I'm going advocate next?

AUDIENCE: Watch yourself.

ROBERT GREEN: Everybody has been there. Yeah. You want to make yourself a better speaker, listen to yourself speak. Ums, ahs, you knows. I'm keenly aware I say right too much. I'm trying to mitigate that. Accent, tone, all that. You'll definitely become a better speaker if you record yourself and listen.

Listen to the recording. How does it sound literally? How are you speaking? Do you need to do that? Is your microphone set up properly? Literally, everything about it, listen to it. Did your presentation flow well? Did you stop? Did you start? Were there places that you weren't comfortable? Was there a place where you said, oh, I forgot this, let's go back. What you're doing now is you're getting everything in optimal order, so that it flows just exactly right.

And incidentally, when you have this training showing the person the new plotter, when you have this in exactly the right optimal sequence, and it's super easy to follow, and it flows, and it's perfect, what have you just created? A CAD standard. Think about it. Show them how to do something in an exact perfect way, and surprise, they might actually do it that way.

Does this make sense to the user? Can you understand it? Well, you know if you just recorded it, and it's confusing to you, it's probably confusing to other people too. You may want to have somebody else look at it. Just look over your shoulder. Hey, does this make sense? Did you follow what I'm doing here? That's reasonable.

Is there anything you would change? If so, let's go back and change our notes, maybe change a sequence. Let's start our example files from the beginning and let's try it again. Repeat, repeat, repeat until it's right. And if you press the record button on every one of them, you may be surprised. By the time you did a fourth time, you may have a keeper. You may be done.

You may not have to record it again, which is great.

The good news with this is it really gets you used to recording yourself. It really makes you learn to speak better, it makes you move through things at a better pace. And the one thing that I do find myself doing though that is a problem is I find myself moving very quickly between steps. And by that I mean, you move your mouse from one point to another at warp 5. And the person who's watching that screen, they don't know where you're going to take that mouse, so they really don't see it.

So one thing that I've changed is that I turned those real exaggerated mouse trails on, so that people can see where the mouse is moving. That's one thing I have changed in my technique. So you may want to slow down your mouse movements a little bit, be a little bit more deliberate about going from point A to point B. And just describe where you're going on screen. You'll have a video segment that's easier for people to follow.

So simply just adjust, rerecord as much as is necessary until you get a good, logical procedure and flow. Now what you really have is a video CAD standard. And I would submit that's something that once you have this done, do you have to run a training class on this? Nope, because you've got a video segment that now goes out via email to everybody in the building, and you're done.

AUDIENCE: Train the class on where to find the video.

ROBERT GREEN: So now I got to do a video on where to find the videos. Record, review again. Just go through it as many times as you need to you to get it tight. You're good.

Maximizing your training impact. A couple of tips that I would say for any kind of tutorial that you're ever going to do or commit the video, always show people the end state first. In this training class, we're going to show you how to print to the new [INAUDIBLE] plotter that is located on the fifth floor. Have a dialogue capture that shows the dialog box that you're going to be working in, so that they understand what we're going to be talking about, so they don't have to waste four minutes to figure out that they're in the wrong segment.

So describe the end state first. That allows people to figure out within 15 seconds whether it's something they actually want to watch. Give that brief overview, so we're going to show you how to find the plotter on the network, how to make sure that you're using the right page setups, and how to actually send your print to the print queue. Doesn't have to be any more

than that.

Explain that in this video segment, you will see yellow clicks which represent left mouse, right, which is represented by a little red circle, and you'll hear audible mouse click, so it's easier for you to follow the mouse clicks. Now let's get started. That's pretty much out any of my section-- any of my segments are going to begin.

Move the mouse slowly enough so that people can follow where it's going. And just emulate a one on one, sitting at the user's desk feel. If you do that, you're going to produce a video segment, it's going to be real easy to watch, and that people will find very easy to consume. If you are a fast talker, slow down a little bit. Speak clearly and calmly. Enunciate. Watch the ums, and aws, and things like that. And you'll produce a really good captured video segment. Makes sense?

All right. A little trial and error goes a long way here. And I will say this, the number one way to get nervous about recording yourself is to keep reminding yourself that you're recording yourself. That is the curse right there. The goal is to be experienced enough and that's why I tell you, when you do your rehearsal, record it. That way you're just very used to the fact that I'm always being recorded, it's natural, you get used to it. It really does become easier as you do it a little bit more.

Now I will say this. While everything's YouTube now, and there's no need to have anything written down, how many of you sit there and watch a YouTube segment and have a little notepad to the side of the computer, so you can write down the little pertinent facts that you're going to find out? I do. There's still stuff that I think needs to be checked listed or cheat sheeted is a lot of times what I like to call it.

I will typically give people a little one or two page procedural checklists. So here's the plotter dialogue, here's where you're going to go, et cetera. To me, if you're going to create a video of it, you might as well go ahead and get the pertinent screen captures and create a cheat sheet for it. I'm not talking about writing a novel here or a great work of fiction, I'm talking about a cheat sheet. So, don't make this too difficult.

Notice that I haven't talked about creating any written material yet. All I've talked about is video methodology, and the reason why is most of us speak and teach naturally. Most of us find writing documentation a chore. Is that correct? Do you guys agree with that? How many people like writing technical documentation? Eh, there's a few hands go up. I kind of like it. I

got better at it over the years.

So what I'm doing is I'm basically saying create a great video tool and then simply use the video to create your hand out. So I'm going to do it in a backwards order. Most people would think, no, I need to write it all out. No. Just speak, speak naturally, capture it, and then use that natural speech flow to generate your handouts.

So basically what people will do is they'll watch your video segments, you'll give them a cheat sheet, and then they know enough in their mind about how it works, they'll just revert to the cheat sheet. They'll tend to get away from the video and they'll look at this little piece of paper that they have. And that will be their crutch for the next five, six weeks until they got it memorized, and then the cheat sheet gets thrown away. And then we're done until the software changes, which is next year, which is why editing is important, because we'll have to do that.

So I'm a big believer in trying to get this right, especially for step-by-step procedures, learning new software features, it's hard to talk people through that. It tends to be a click, and pick, and dialogue driven environment, so you have to have a cheat sheet for it anyway. Screenshots are best, because you navigate through software using menus and visual cues in the screen environment. So don't worry about being wordy. Worry about being pictorial. Keep your text minimal.

Your video rehearsals actually are going to be the thing that makes your hand out preparation extremely easy. And I don't know whether Screencast does this, but Camtasia does it. Once you have made your Camtasia recording, you can scroll through that recording and you can stop at any point, and you can get a screen capture out of the video at any point. So you don't have to go back through and reproduce the example, and get all your screen captures. You can pull your screen captures directly out of the video, so it even saves you the time of doing that, which is a great little thing.

So what you do is you simply run through the video-- literally, rewind it, press play. And just kind of watch it 30 seconds at a time and say, OK, I need a screen grab here. So get it, put it into a Word doc. I need a screen grab here. Get it, paste it in the Word doc. Then once I get my screen grabs done, I go back to the beginning again, and I play through it again, and I say the key words were like this. And Camtasia, by the way, also supports speech recognition, not perfectly, but it's not bad. It's roughly equivalent to talking into your iPhone.

So it can actually kind of crank out some of the text for you, which is kind of cool. So you can grab that and paste it in. Just put that pertinent text phrases between your screen grabs, and you're pretty much done. That's really all there is to do creating cheat sheet driven documentation. I recommended it. So make sure you get all the pertinent screen captures that are required, paste it into the Word doc, add your text comments in there, and that's it.

Now the thing about writing a procedural document is you had to try to remember, well, what did I do? Well, you got a video that explains exactly what you do. So this really speeds replication. When I do magazine articles, and things like that, the funny thing is, I actually turn on Camtasia and I just start talking into my desktop mic, and I turned the speech recognition on, and I just imagine I'm giving a presentation, and I just talk through it.

And when I get done talking my way through it, I just go back and look at the speech recognition, and pop that into a word segment, and I just start editing it and playing with it. That's pretty much how I develop story ideas and stuff. So, I even use this for developing written material, even if there's no screen captures to go with it. So don't remember what you did? Watch your own video. It's not really all that hard, and you'll find that it will make creating handouts super easy. Highly recommend it.

Once again, as you go through and do this, listen to yourself and critique your own speech patterns. It is painful. It is. Anybody in here your musical? Ever record yourself? Yeah. For research purposes, how many of you are musical? There's usually a lot hands go up. Eh.

So I think what we've got now is a way that we can use our video tool, whether it's a Jing, or a Camtasia, or a Screencast, or whatever tool you're using, we've got a methodology for using it. To story board, use it as a rehearsal tool, a self-improvement tool for us as an instructor, as a speaker to get some pretty tightly produced video segments, and to produce cheat sheet level documentation along with it. If you can do that, you're very effective at it, you can now start spitting this stuff out pretty quickly. And I would argue, if you do this over several months and years, you should probably have a standards library of video segments built up. You should probably have more or less a new employee training guide build up.

See what I'm doing with that? I'm just trying to tackle all these problems. Now for those of you who do instructor-led training, which I think was a lot of you, because I saw a lot of hands go up, if you're going to go into a room and conduct a training session, for God's sakes, record it. That doesn't mean it's going to be the best training class you've ever done. Matter of fact, it

may be the worst training class you've ever done, and you wind up deleting it, but so what? Record it, because chances are it's going to go pretty well, and chances are it's the training that you'll need to repeat at some later point. So why not capture it?

When you guys do your instructor-led stuff, do you typically carry a laptop into a training room or just curious? Is that-- yeah, is that-- more or less. So you'd want to get your recording utility on your laptop, obviously, and get that all set up. And you probably want to get your headset microphone at minimum, so that you get some decent audio. The only thing that I do differently now in live training is I will say when I start, can we please hold training to that the break-- sorry, hold training. Can we hold questions please until the times where I indicate, because I don't want the flow of the training broken up by a bunch of questions. And people are generally understanding of that. I'm recording this, so I'll let when we can have questions. And then it's easy for me to go later and edit those gaps out of the training class. That's really the only difference as far as I'm concerned.

So if you're going to train live, record it. Absolutely record it. The worst case is you inconvenience some electrons for a period of time.

Thought I was going to say something else in there, but apparently not. OK. What I would recommend is, do tell people that it's being recorded, because I have captured some voice recordings of some things that were said about people that probably ought not have been said about people. So do let people know that, yeah, we are recording this. Like I said with the question thing, and other than that pretty much just go ahead, go off and rolling, and start up and record it, and we'll go ahead and push that out later if you missed the training meeting you can watch it here.

Final recordings. A lot of times I'll get people well, OK, the training class that we run certainly wasn't perfect. I messed up one place, something like that. I don't really see that as a big deal, because I don't think people have an expectation that it's perfect. They don't have an expectation when they come into a meeting that it's going to be perfect, so I don't think-- now, you don't want to have gross, huge errors that are recorded. But if you have a few little false stops and starts, so what? And it's really not a big deal, really isn't.

If you really do mess up in a big way, what you can do is say, man I messed that up in a big way. Pausing now for about 10 seconds of dead air, so that when I go back to edit the video I can find it, and I can cut that out. And I'll say, all right, let me just start that again. We're going

to pretend like that never happened. And it's pretty easy to go back and edit that out.

If you do, however, want to do a really nice final production recording thing, my checklist is kind of as follows. If there's any sort of things that I want to state if I have a script, if I have any narration points that I have to say in a precise way, I'll print those out. I'll put them up on my copy clip. All my example things are in order. I'll do a full reboot of the machine, get everything reset up and retested.

Mute your phone, close the door, tell your boss that you're recording, put a sign on the outside of the door that says, do not knock, I am recording-- everything that you can possibly do to mitigate interruptions. And then go ahead and run through it. You're not shooting for perfection. Like I said, if you screw up, just stop, give yourself 30 seconds to recollect your brain, start from a place where you made the error, and then just edit it out later. Don't feel pressure like I have to do 30 minutes perfect without any mistakes, because you'll be there all day. And as soon as you start thinking about making mistake, you'll make more. I promise.

So that's kind of how do you that. Just other tips and tricks kill. Your email client, anything else that can pop up on the machine. I'm a big fan of turn your wireless transceiver off, so that you're not getting any email, or anything popping up on the machine. Do yourself a quick little warm up, get settled in, clear your throat, crack your knuckles, whatever else it is that you need to do, and you're good to go. Run to your exercise at full speed. Pretty good, you'll probably capture it pretty well.

How many of you are comfortable doing this already? Just curious. Pretty comfortable? All right. Don't stop, don't worry about minor errors, don't think about being recorded. That's the hard one, right? That's the hard one. If possible, if you're trying to do a really high quality recording of a live training environment, if possible, get one of these wireless setups so that you can get it right onto your shirt, and really get the audio set well, so that you're not moving away from a microphone, and your sounds not fading in and out.

Make sure you have all your materials printed out ahead of time. Again, pretty much all that the same reboot preparation tips that I would have done if I were in the studio room. And do a test recording, and all that stuff, before training starts. My goal would always be to be in the training room, have my machine set, ready to roll at least 15 minutes prior to people arriving. What I don't want is the dual stress of people arriving for training and having a hardware problem. That gets your pulse up, it makes you nervous, and you're not going to do a good job

training. So you want to kick that training off in a nice relaxed, calm state. OK.

Post-production. When you get done recording the training, at some point, you're going to want to put that out there for public consumption. And a few words about possible formats for that. When you push-- now and say here I would say that the software you use will determine or dictate some of your flexibility here. If you're using Camtasia, it's like Swiss army knife. It can literally published anything. If you're using Screencast, it's going to go ahead and publish to it's, basically it's clouded Screencast environment. And then you're going to have a limited capability to pull back down in MP4, which is very common for Apple devices.

Then something like a Camtasia, it could even manipulate data into another format. Or there's another utility, which I should've put in there that's called-- you may write this down-- it's called Any Video Converter. That is a real slick, little tool. Any Video Converter. It'll basically take almost anything in, and spit anything out. You can't edit it. It just changes the format, but I've found that great for pulling things off camcorders, and cell phones, and things like that, and getting that into other video workflows. For the most part, it kind of seems like people are using MP4 these days. That's because it's a very Apple-friendly tablet friendly format. And almost everybody's Windows machine as a way to play that back anyhow.

If I went back a couple of years ago, I used to use Windows Media a lot more, because every Windows machine can play it. And you don't have to worry about is there any driver software. In years past, a lot of people used Flash. And then in the past couple of years, there's been a lot of Flash Player viruses and malware that's been going around the internet. And a lot of IT departments have said no, I'm not going to use Flash unless it's behind our firewall. So I've kind of got back to Windows meteor MP4-- pretty much the two formats that I use for output.

The resolution, obviously, that you're outputting to, that's a question. So what if you record in 720 standard HD? You could obviously render that out the standard HD, and it would be a nice quick, it's not having to do any conversion, but you may want to push that out something smaller for an iPad. So Camtasia would give you quite a lot of flexibility to do this. Screencast, not so much.

Camtasia is real good about having pre-sets that are for specific devices, like things here, smaller like iPads, and AVIs, or lossless, like movie formats. It's just basically got presets for almost everything. So I'll just throw that out there. You can also typically produce, if you want to do podcasting-type applications, you can also produce an MP3 sound-only file. So if you

wanted to produce just the audio from a talk, or something like that, it's pretty easy to do that. And I've found that more useful than you might think.

Have you ever project kick-off meeting? A lot of it has to do with questions, and maybe you wanted to do an MP3 or audio-only file for the questions and answers. It's pretty useful actually. I find myself using it more than I thought. At least in the Camtasia pre-sets anyway, they have a way right down at the bottom where you can create an MP3 file at the same time that you produce your video. So just look on the output screens as you go through there. The more you have to support weird outputs, the more you have to support different resolutions, different devices, different environments, the more you need to do that, the more unique Camtasia. I would say that as a matter of course.

There's another really cool thing in Camtasia that's pretty slick that I wanted to point out. Right when you go in your production, produce and share, there's an audio tab in there. And it has a thing that's called volume leveling and noise removal, which are fantastic. If you're real kind of a speaker that goes hey, and then was real quiet, it will level that out. And if you're in a noisy room that has a lot of background noise, that will null that out. It's like a noise canceling headset and it works really well. And it really doesn't add a lot of overhead to producing the video as it computes, so that's pretty cool.

The volume leveling I would say if you recorded in a nice, clean studio, you may not even have to use it, because it was quiet in the first place. But if you're in any kind of a noisy lunchroom, training environment, you might want to use high noise removal on it. It works pretty well. So make sure when you do all of these parameters, and everything that I've just talked about, make sure and save your configuration changes, so that the next time you do an output, it'll have your presets for you. And you won't have to redo all this.

You should now be able to pretty much get your video, including audio out to almost any format that you want, and that can be played back on almost any device that people want to consume information in. And as far as I'm concerned, if people want to look at there-- if they want to run through CAD standards procedures on an iPad at 8:25 after they've watched the *Big Bang Theory*, that's great. They don't have to be in the office as far as I'm concerned. I find myself doing a lot more stuff for mobile devices than I used to.

If you're going to produce a video, man, use it over, and over, and over again. So store these things out in your wide area network, partition off a network structure for it where people can

get at it. That would obviously be read-only to most of the world, and able for you to write into, or edit. Let people go there, look at videos. Maybe you want to do a real, clean, little HTML front-end page, a little internet page, your training-type thing. I don't know, it's up to you. But what I don't like, or I'm not a big fan of, is you produce these cool segments, and you send them out in an email, and we all know it 90% of people do with their email-- they delete it.

It never gets watched, it never gets consumed. And since it's never really organized into a library, why do it work, if people aren't going to find it? So I'm definitely a big fan of make a organized repository for this stuff where people can go find it and use it over and over again.

Encourage people to be able to download these things off on to iOS devices, like iPads. And what I would say is, if you produced a hand out, a little cheat sheet, paper thing, well, that's just the PDF file. So why not throw those up there too? Let people get the video segments and let them print out their little cheat sheet, so that they can walk through the flow of it as they watched the video, and that's a great way to learn stuff. I tend to learn best that way if I have something that I can actually write notes on as I'm going to do the video stuff.

So just store everything in PDF. And if you really want to get fancy about it, put a hyperlink on the front of the PDF file that references the video URL, so that they can pull it up in their PDF viewer. Click the link, and the video starts. And it really doesn't get much cleaner than that, and it's easy to do.

AUDIENCE: You could hide the videos.

ROBERT GREEN: Yeah, yeah. You could hide the videos as long as they're discoverable, as long as they're read-only format. Yeah, but by all means, you put this stuff in a folder, don't have that full access to the whole world. You manage and maintain that.

My goal for doing a video format or a video training repository is basically to enable people to learn on their own, to find the material on their own, to walk through it as many times as they need without embarrassment, without failure. If they've got to watch this thing eight times to get it, they can watch it eight times, and nobody has to know. So if you make this stuff universally available, and people can go get it themselves, they'll tend to learn independently, or more people will than not. And they will actually go use it. It has been my finding.

People won't come to training. People won't read written stuff, but they will go watch videos, especially if it shows them their software in a context that they're familiar with. Users can watch

this over, and over, and over again. They know where it is, they don't have to ask you where it is, they don't have to bug you, fewer phone calls, fewer emails, it's just smoother for everybody. And it really does work. It takes a little-- yeah, does it take a little time on your part? Yes, to get it organized, it does. But it'll pay off, because you'll have fewer repetitive questions.

Organize this stuff. You may actually find that you got a standards library that you got billed without even known at it, without even really having to try to do it. I think the real key to this, though, is to stay at it. You can't just produce five or six video segments next month, and then quit for a year. You have to keep chugging at it. You've got to produce one or two of these little things every month until you get a decent library of it built up for all your standards. And right about the time to get it stable, and everything works great, that's when AutoDesk changes the software, and you got to start over.

So you know you're never quite done in my experience, but if you keep at it, I find that I get a lot of multiplication, a lot of leverage on my time and effort, especially now that I'm comfortable with it and it's natural for me I can produce stuff pretty quickly. And I can literally produce a five or six minute training video faster than I could go teach somebody one on one, and now I've got it captured forever. So take the time to get comfortable with it, and get up over that learning hump, and I think you'll find it will be worth your while too.

So it looks like we're done a couple of minutes early. I will put my email and such up for you there. Did everybody get a few tips, or ideas, or things that they could use? Was it worth your while is what I'm asking? Yeah. OK, very good. Thanks for coming to AU. I know some people are going to start to leave, and that's OK. But I'm happy to take questions. You want to have questions? Come up.

[APPLAUSE]