

Welcome to the Best Practices Course monthly coaching call for February. It is just about 1 minute after 11 here in California, and it looks like we've got 24 people here, and I'm sure a few more will join us. I think there were something like 35 that registered. And of course anybody in the course can come in during the session. So I'm sure we'll get more. Anyway, you'll see an image here. This was submitted by one of our course members, Anthony Eason, and we're going to take a look at how to create a few of these ornate shapes, that will be one part of the session. We also have a question that I'll look at from Gayla Bechtol, and another one from Marek Stoklosa. [1:01]

So let me begin. Let's see then, I guess Gayla had sent in a file that she said - let me just bring up the note that she had onscreen. Alright, so she said, she's trying to model a site with hardscape, trees, etcetera, and she's updated everything to ArchiCAD 14, however it's still difficult to migrate old projects. Fortunately, they are not many of them. So I guess I'm not quite sure what Gayla's question is beyond the migration. So let me just deal with the migration and then if Gayla's on the line, I'll have her - yes it looks like Gayla is there. So actually, let me just unmute Gayla right now. Let's see, there okay, so Gayla, are you able... [2:10]

Gayla: Yes.

Eric: Hi.

Gayla: Hi.

Eric: So I understand that you have a question about migrating the project, and is there anything else beyond the migration that you want me to look at?

Gayla: Well, I'm finding it difficult to model the site with the Mesh tool, or trying to use the Mesh tool in the slabs, and getting them all to be the right elevation. I know that the elevation I have the topo, and that's where I use the topo drawing to create the mesh. But, the elevations don't make sense, or I don't know if it's the story settings or the elevation settings that I got wrong? [2:54]

Eric: Okay, well I think you've given enough to get started. So let me look at the migration quickly and then we'll take a look at the site's terrain, and we'll see what we can do in 10 or 15 minutes to...

Gayla: Thank you.

Eric: Okay, so I'll leave you unmuted in case there's something you want to tell me while I'm working on it. So what I'm noticing is that when I open the file here is that it says that there are some libraries that are missing. So it is finding the ArchiCAD library in its standard place. Now you are loading the add-ons folder. Now the add-ons folder generally does not contain libraries, so it usually isn't needed and won't do you any good. It won't do any harm either, unless you've put some junk in there that either helps or hurts you. What I'm going to do is just say; no we don't really need that. So at least for my copy file right now, I'm going to remove select library element to clean it up. [3:57]

Now, you have a reference to the MasterTemplate library, so I think most of you on the call will know that we produce a product for ArchiCAD users called MasterTemplate, that is a good startup kit for an

office standard. And it does include a library component that supplements the main library. And so your project Gayla, is referring to that, but it can't find it. Now, maybe it can find it on your computer, but it can't find it on mine. For example, it's looking at the C: drive/Gayla; so obviously I don't have my computer with that location. So when you move things from one computer to another, what you need to do often is to relocate it, basically find it, for ArchiCAD. [4:47]

Now there's no button here that I can right click and say, here's where to find it. What I need to do is simply say Add. And then go find the equivalent thing. And it's a Mac. So for example, I go to the MasterTemplate 14 folder, and I go to the AMT Extra. It would be AMT 14 USA, this is where I have it. And we have the MasterTemplate 14 USA library. So I'm just going to say hey, would you load this for me? And when I do that, you notice that instead of adding it to the list, it basically replaced the warning sign with something saying hey, this is where it's located on Eric's computer. [5:34]

Now the MasterTemplate linked files is actually not something that we would load normally as a library. It is intended to be used for the hotlinked modules and for the logo on your master page. So we don't need this. If for some reason we needed it, I would click on Add and go find it. But we really don't need that. So I'm going to say hey, don't bother with that. So at this point, we've got the main ArchiCAD library, we've got the MasterTemplate library, which is the equivalent of an office library. In other words, we generally recommend that you have an office library of things that you load for multiple projects. And then if you needed components, you would also have the embedded library, if you needed local ones. [6:25]

Now generally, with the MasterTemplate, we have some linked files. And so we would normally see them up here, so I'm a little bit concerned, puzzled. Anyway, not quite sure why that is. So let's just say Okay and see what it finds. Now obviously, for today's call, I don't want to go into too much detail specifically for your particular project, but those are couple of tips there. Don't load the add-ons folder, you don't need to. If you are moving things from one computer to another, or just simply things get out of place, it will simply say, "A library is missing", and you'll just need to go locate it manually for the program. And then when it finds it, it will say, hey, Okay, that one's in view. [7:10]

Now let me go and bring up - okay. So it's coming up now. And I must confess to everyone that I haven't actually looked at this project yet, so I'll be working on the fly. But let's see what we can do. So it's giving a warning about hotlinked modules, this is common with MasterTemplate. Basically saying that there are some attached files that are not found. Generally, if you're not going to be editing those files, you can ignore this message, because it says elements of these modules are visible in the project, but you cannot update them. Basically it's saying, if you have made a change to these files, it won't be able to show you a later version. I'm just going to skip that message and say Okay. [7:59]

It's also seeing that there are some other links in MasterTemplate for the specifications that are missing. In this case, because we just covered this and the recent module on general notes and specifications, I'm going to show you the way the you can relocate these quickly. I'll just say Read From, but this says, it will say, all of the missing drawings that it can't find, I'm telling it to see if you can find a file with the same name. In this case MasterSpecifications, and I'm just going to go to the MasterTemplate 14, to inside the

MasterTemplate folder, to the MasterTemplate linked file. This is where the linked files are used. [8:45]

Inside it, you'll see that there is a file called MasterTemplate MasterSpecifications.doc, that's the Word document that's used for the specifications. And then there's the PDF. So by telling it that it should look in this folder, all of these references that we see poking out on the left side will then be able to be found. We don't know the results quite yet, because it actually just makes a note of that, but we're getting the standard message that we can always ignore. This one this says Update Drawings? It says you can always Skip All, unless you're opening a project simply to print it, because you can basically, you'll update things as you open them. [9:28]

Now, The library loading report says that we're missing a couple of things. So even though we had a message about - I pointed out in the Library Manager that we didn't have the hotlinked modules available. It's really only missing a couple of things. Let's just see, it's just missing a north symbol. Now this particular issue is specific to MasterTemplate, it's a very simple thing to fix. It has to do with the fact that we have a north symbol on - let me just move our navigator where we can see it better here. We have a north symbol on the title sheet. And if I zoom in on it, you'll see that there's an area on the title sheet that says vicinity map, and its intended to have the north arrow in whatever direction is appropriate. [10:24]

So what I'm going to do is to correct that, I'm going to select this here. Which you see "north symbol 12" up top, and I'm just going to simply go and open up the library part where it says there's a north symbol that is not available in the loaded libraries, and I'm going to go find the north symbol that is in the standard 14 library. So I'll go under Folder View here and say Find Library Parts and say north and click Find. And you'll see that it has two different north symbols. I'll say, yeah, just use the one that's the updated version here, "north symbol 14". And you can see that it shows up properly. Now it may be little bit bigger than one would want, so one could go and perhaps change the scale of it to that. And then you can also rotate it either manually, to indicate where the north position is, or there is a setting in the north symbol, which not everybody knows about, that says, "Do I want to follow project north?" [11:31]

So what this does is if I turn that on, and say Okay, initially project north in the project is set straight up. But, at some point, if you go into the project preferences to levels and project north, you can say, you know what? North is actually over there. And you can type in an angle, maybe its 41° and that will just adjust to whatever it is. When I say Okay, as soon as I zoom in or out, this object will refresh and point in the correct direction. So the north symbol can be placed in a template, will update automatically when you tell ArchiCAD the direction that is north for this particular project. [12:19]

So at this point, I've fixed the issue with the north symbol in one place. If I say "refresh Element List" here, you can see now it says "1/1" rather than "1/2". And so actually the north symbol is not missing. I'm sorry - actually it's only missing in one other place and that is - let me just select this and copy it, we have, in MasterTemplate, we have two sets of projects files. And you can see that there is the 1 through 17 versions, and then there's the A200, A300, A400 one. And so in the template, we have another title sheet that is setup in the same way. You'll notice that I'm on a different title sheet, and the north arrow

is missing. So I delete it, and simply paste in the one that I had before from a minute ago. And then I'll just say, "roofresh Element List", and now it says "0/0". [13:14]

So basically, that north symbol is updated. Now, it is saying that there are some libraries that have some duplicates, and in version 14, when there are duplicates, we can click on the eye here, the information one, and it will tell us that there are some things that are duplicated between the MasterTemplate 14 USA Library, for example, and the embedded library, exactly what those are. Because those are so specific to MasterTemplate, I'm not going to go into this particular one. I'd rather focus on a little bit on your mesh question. But essentially, what needs to happen is, instead of loading the MasterTemplate library separately, it should be loaded from the hotlinks to the - that are part of the hotlinked modules. [14:10]

So I'm going to skip that, and Gayla, I'll be happy to send you a quick email with quick instructions on that.

Gayla: Thanks.

Eric: You're welcome. Let's a look then at - you're actually going back to the floor plan. So I just hit F2 which jumps me back to the floor plan, and we'll just zoom out and take a quick look. Alright, so we've got obviously the site down below. What is this thing up top here? [14:37]

Gayla: That's a lake that's in a pasture that I'm just keeping track of.

Eric: Okay, so we'll ignore that for now, and we'll go into the area that is the site. Now, I'm going to be having an entire module of the course on site modeling. Basically conceptual design from the standpoint of developing site property lines and terrain modeling. So what I'm going to do is do a very short version of that or at least a couple of excerpts from that in today's call. Because really, there's a lot to go over, and I'm going to be covering that probably in about two or three weeks. In terms of we're due to do week number six at this point, and it would probably be about week number eight or nine. So it will be coming soon. [15:35]

So let's take a look at what you've got here. So when I select this, we can see that there is a mesh that it has got a lot of points on it. And I can see it's selected with some heights. Now it says that it's starting its base at 20, and going up to 27. What that means is that all of the point references that you've got are referenced on top of the 27 feet. So for example, if I go to any corner point like this and say, what is its Z height, where did that - okay, let me go to the Mesh tool here, and if I can get - there we go. No, so let's click on the zoom. Okay, here we go. It was not accepting it. So what this says is this height is 49 feet above the 27. [16:36]

So it's sort of a little bit awkward math, because it's not instantly easy to think about. But obviously, it's 76 feet is what I would wager is in terms of the project zero. Now you'll notice that there is also this little popup that a lot of people will ignore, or just not know that it's available, and it says that you can also say, "How does it relate to sea level?" And when I do that it says, oh, 6729 feet. What that's telling me is either and you're working in New Mexico, where things are pretty darn high, which I believe you are

New Mexico right? [17:14]

Gayla: Yes, that is correct. It's not quite that high, but that's a good point.

Eric: Okay, so not everybody knows that you can actually reference mesh points, as well as many other elements in ArchiCAD, based on this current story, or the project zero, or sea level. And obviously, they're all relevant for different contexts. So let's look at your heights. And you tell me what height it should be. So that point there, should it be 6700 feet, or is that way off? [17:50]

Gayla: It should be probably around - let's see. The slab in the middle is at 6553. And that is about 10 or 20 feet lower, I'm not sure which.

Eric: Okay. So the slab in the middle, like where I'm pointing my mouse...

Gayla: Right. It's 6553.

Eric: So if I say, what's the height of this one, it says 6732. So it should be 6500 or something?

Gayla: Yes, correct.

Eric: Okay, so let's look at your heights, and see why that's off, and more important how can you control it? So if I go to the project map and right click on a story, any story it doesn't matter, one of the options will be "Story Settings". And if we look at Story Settings, right now you've got the story settings on the first floor is at zero, relative to the project zero. Which is just fine. It's actually very convenient. Then, you can say that these walls are all at zero, and other walls, like on the second floor, are 10 feet above, etcetera. So that's not a problem at all. It used to be - now by the way, we're getting an echo right now. So the only person I have un-muted would be Gayla, so Gayla, did you change something? [19:18]

Gayla: No, you can turn me off, if you want to.

Eric: So I'll tell you what. I will do that if need be. Okay, it used to be that I would recommend that you change the first floor to an elevation in relationship to sea level. For example, 6500 feet or something like that. But in later versions of ArchiCAD, and I'm not sure where this started, it may go back to ArchiCAD 10, and may not have become available until 11 or 12, I don't know. We do have an option to set the project zero. Let me go back to the Options, Project Preferences, Levels and Project north. So I'm going to bring this dialogue box up, but before I do that I'll just make a general tip. Under the Options menu, Project Preferences relate to this project, and would be come across like you sent me this file, so I'm seeing the project preferences. [20:21]

Now I'm going to put you on mute, because it is echoing. So I'll unmute you in a little bit. So now Gayla is muted. So if I go back to ArchiCAD, and go to Story Settings here, so if I - I'm sorry, under Project Preferences, I'm seeing all these project preferences that came with the file. Whereas Work Environment has to do with the preferences for the particular workstation. So I don't - whatever Gayla has set for her work environment, I don't see her keyboard shortcuts, but I do see project preferences as they come across. One of the project preferences that is very important here is the Levels and Project

north. [21:11]

I opened that up a minute ago to talk about where the north position was, but here's the sea level. So now I'm going to unmute you Gayla. Alright Gayla, so the finished floor is how many feet above sea level?

Gayla: Well, that's the 6653, I would like to have the finished floor be the 6653, seven and whatever that is, 13/64.

Eric: Okay, alright. So actually then, you did that correctly. Not everybody knows that this is available. So then let's just say what's wrong with the other information. For example, if I press down this point in say I want to look at the height of it, it says 6732 to sea level. And it says to project zero, it's 78 feet above project zero. Now should this be at the zero of project zero? In other words, should it be at your finished floor level? [22:12]

Gayla: Yes, it should be.

Eric: Okay, so what that's saying is that this point - I could go of course go type in zero now, and then that particular point would be correct. Of course, all of the other points around it would then be incorrect, and so probably it's not the right approach. So let's just look in 3D. Let me just say bring up the selection in 3D, and if I zoom out, a little bit - so you're unmuted. Tell us does this look about right?

Gayla: The topo looks correct, but I had modeled buildings and driveways and things.

Eric: Okay, well I had turned off - I said just show me the mesh. So that's why we're not seeing the building.

Gayla: Okay. It does look right.

Eric: Okay, so if it looks right, but the height of things is incorrect, the easiest thing to do is to move the whole thing up or down in space to be in the right height. Now let's look at your building. So I'll go back to the floor plan, and now we're on the first floor. Are your buildings on here?

Gayla: Well there are two existing buildings on the left, and...

Eric: Simple models there, do you have a slab as well here?

Gayla: There's a slab and a roof and some walls, and I think that's all I put on those buildings so far.

Eric: So basically, this is everything that is visible, so I can go to 3D and say show all?

Gayla: Yes.

Eric: Okay, so we'll do that. So now we're seeing the extra stuff. Alright. So actually, everything is integrated just fine, however clearly they're at the wrong height relative to sea level. And relative to the story. If I select this slab, it says that it's up at 78 feet above the zero, and should this slab, for example, be at zero? [24:09]

Gayla: It should be at zero. Or close to - that slab actually is about 33 inches below zero.

Eric: Okay. So we can do is with everything selected, and I'll literally just go and say Select All, now of course you want to do this with the whole model visible and unlocked. So if there's anything that is hidden it won't be affected. But for training purposes, I won't even bother with that, I'll just simply say, as long as you have everything selected. I'm going to zoom in maybe a little bit to do this. So I'll take this point, or maybe this point here, where I can see the top of the slab, and I will say I want to move it not horizontally, but vertically. Just elevate it. [24:58]

Now, that point here, if I turn on my tracker, right now it says that the elevation is zero. Well that means that I haven't moved it up or down. And if I say move it down, you can see that it moved it down 1 foot 2. And if I move it down further, maybe 5, 6, whatever; so whatever that distance needs to be. And let me just - before I do this, let me just measure this height. If I use the Measure tool, and go to this point, it says the "Z" coordinate is 78'-2 31/64". So I know you said it was 33 inches or something different, let me just move it down to zero. So then we can just see how that works. [25:48]

So I could remember carefully that it's 78'-2 31/64", or round it to 78 feet, two and half inches. But a very nice shortcut is to hit the "Z" key. In this case, I hit the letter Z, it highlights the Z value, which allows me to either input a value if I'm editing things, which I'm not, I'm actually moving things, but it does allow me to copy it. So I can go right click in here. Actually, no. I can't right click; can I go to the edit menu? I may be able to copy using Command+T. I know in many cases we can do a copy just with the keyboard shortcuts. So I just copied that. [26:31]

[26:36] Now I'm going to use the measure command, press down on here, and say I'd like to elevate it. And let's see, if I type in, if I paste. No, okay. I didn't, and the pasting is not happening. Let's see if I type in "E" or "R". Okay, let's see, sorry, stumbling a little bit here. So we're going down. If I type in a value, 78, and I don't know why - it was 78 feet 2 and 31/64. So I apologize, the copy and pasting doesn't seem to be working in the tracker. I have used the Coordinate palette successfully before. But let me type that in and hit return, or enter. And you'll see everything moved down in space. All integrated. And if I measure now, you can see it says "Z coordinate 0". Actually I remembered the number correctly. So what has that done? [27:36]

Basically if I zoom out a bit, this model is all still working together. But if I select the slab, it says that it's 1 7/64 inches. So I would have to adjust it and make sure that the distance that I'm moving everything up and down is correct. But basically, I moved everything together, and now with a little bit more adjustment we will get it exactly where it needs to be. If I go back to the floor plan, let me zoom in on the center area, and I select - let's see, the slab, you can see that again it's 1 7/64. So basically what we want to do is move everything together, up or down, and get it so that the heights are correct. Do you have any walls on here? [28:34]

Gayla: Yes there are walls; they're yard walls so far.

Eric: Okay, so if I select any of these - let me just select one of these so we can query what the size is. So that wall here, it says that it's top is two feet whatever, and it's going down to minus six. So obviously

that's a height related to being on the terrain as opposed to a building wall that would more...

Gayla: correct

Eric: ...commonly start at zero and then go up. But the bottom line is I can just finish up with that. It is a good idea in later versions of ArchiCAD and perhaps in all versions since 10, I'm going to mute you Gayla again just for a moment. It is a good idea to set up your story settings so that the stories have a very natural or intuitive height relationship to each other. Well obviously, they're going to be related to each other, with so many feet between one story and next. But, generally putting the first floor at zero of the project these days works very nicely. You might have another zero that you prefer; perhaps it would be a grading point nearby. Something, whatever is really going to be the easiest for you to relate the entire building to. [29:56]

And then separate from the building geometry, which let's say in theory, you could work on in isolation from the mesh. In other words, you could work on the building just by itself and say we're going to put it on the terrain later. So think about setting it up like this, to make it easy to work on the building, and then separately to relate to sea level, and grading points. Go to your project preferences, Levels and Project North, and say Sea Level. What distance is it? Obviously, most of us are going to be closer to sea level than you are. [audio cuts out - 30:31]

Eric: ...[30:44] My wife actually lived in New Mexico for many years. But in any event, you would set that sea level reference up. You do have an option to do another data point. You can call it whatever you want. You can give it a reference, whether it's street level or some other reference name. And that can be used. But generally, sea level is the one that people will need in relationship to the project zero. Now, if I look just to finish off the final thing of this section, at grading points. So there's the level dimension. The level dimension is a tool that's very sweet. It works very nicely. I can go and place the level dimension anywhere I want. Now if I just click arbitrarily, and zoom in a little bit, and let me just make the size of this much bigger for presentation purposes. [31:44]

You can see it says zero, but it's probably not zero at that particular point on the mesh. The reason why it says zero is because right now, it's not attached to the mesh. In other words, it's not looking for the height of the mesh, because I didn't set one critical thing. Now I'm going to go use the eyedropper to pick up the settings, just so that when I put in the next one, it will also have large enough text to read. But here's what I need to do. I need to go to the plumbbob, or gravity, and say I'd like to gravitate in this case the mesh. Sometimes you'd like to indicate the height of a slab. And sometimes you want potentially to look at the height of roofs. [32:21]

But if I say "Gravitate to Mesh", and this becomes active, when I click, you'll see that it says 1 foot 8. If I click over here it says 5 feet, if I click over here it says - each point that I click on will correctly identify its height. And I don't know if you have any contour lines in here. Let's just zoom out. I'm going to assume that this line in space and I'm pointing at is a contour line. When I click on this, and I zoom in on it, well, it says - I've probably just missed that contour line. Let's zoom out. Of course we were off by a fraction. So if I do this one, it's minus ten feet. And this one is minus nine feet. Here's the one foot contour lines, you can see as I click on these points. [33:10]



So it is, if we had the terrain set up, probably it's off by that to 2 and 31/64, is what I'm guessing. Because I imagine these lines are supposed to be even numbers. So I'm just going to unmute you Gayla, and then we'll finish up with your questions here. So Gayla, do you understand what I just did and how that can apply? [33:36]

Gayla: Yes, that's really great, that's really helpful, thank you.

Eric: Oh Good. Okay so I'm going to finish up, and then move on to the next one. Now as I mentioned, Anthony Eason sent in a question with these turrets and towers. But before I go on, I'm just going to look at some of the questions that were typed into the questions screen. Now I don't think - I was told by the GoToMeeting people that I couldn't actually display these onscreen for some reason. So I apologize, let me just read them off. I don't know if this is in the order they were entered, but I'm just going to read them very quickly. Julie Perrucci asked regarding library parts, where do we get additional library parts preferably free and how to we add them to our computer? So good question. [34:32]

There is, in the course membership area, in the section on libraries, I do have some references for the GDL Objects Depository, which is a free place that Graphisoft maintains. If you go to the section of the course on library management, you'll see a link for that. And there are some miscellaneous parts, there are some ones - actually, let me just try to bring that up. It's easy enough for me to find. So I'm going to bring up my Firefox, and oh. I've got this window here, and let's see. So I'm just going to go in search for "Graphisoft GDL Objects Depository". And so you can see that it instantly, if you know the name of course, it's easy to find. And okay, so I've got a message waiting for me here. But this is basically, if you went to the Graphisoft website, normally you would go to ArchiCAD or you would go to Graphisoft, and you would see this. [35:55]

You can find this by going under the community section here. And in community, we have ArchiCAD talk. So ArchiCAD talk is a great resource in terms of, you can ask questions and research if anyone else has the same problem or question that you do. And one of the areas in the ArchiCAD talk, website, if we scroll down here near the bottom is what's called the ArchiCAD GDL Object Depository. Click on that, and we'll see that it says that there's a bunch of stuff that you can download for free. And if I click on site work, we'll see here's some signage, and some Sea Containers and conceptual modeling, some columns. Various things. See you can see there's some really oddball stuff like this cannon here. And tiles with variable colors. [37:03]

Now what you'll find is that there are some things that are actually quite great. If I go to the garden one, I think that you'll have their tree collection. So there's various trees here. ArchiTREE. Here's garden equipment. This is a whole library here. And it says that there are ninety objects, and this includes 40 complex, realistic looking trees, and other, 50 library parts like outdoor equipment and playground stuff. So if we look at the structure of it, it's organized in terms of the old CSI category, so they haven't updated it for the larger CSI system. But you can certainly browse around here. And my favorite here, in terms of the most powerful things in ArchiCAD textures, were in addition to some individual ones more specialized things like from manufacturers. There is a collection here of building textures in three parts. And this has literally 2000 textures that you can download. So if you download all three of them, totaling

probably a couple hundred megabytes there, you'll have just a lot of extra files. And they're not as high resolution as ones you might find in current days, because these were made in the nineties, but it would give you a good starting point for a lot of ability to communicate different types of materials. [38:42]

Okay, so let's see. I hope that helps Julie, you can also do some web searches. I think Archiradar, A-R-C-H-I, radar, R-A-D-A-R. I don't know if it's archiradar.com, but if you look up Archiradar I think that's a website that has a lot of free parts. Objects online is one that sells parts and so there's some good resources there. Some things are quite cheap like 5 bucks or 10 bucks, and other things are more expensive. [39:11]

Now, Ted Mengers asked about the north arrow, you were able to find that arrow because you knew where the two iterations were. That's very true Ted, there's no direct way in ArchiCAD when you have a missing library part to say, show me where this thing is. And I find that very frustrating, I'm sure many of you have been frustrated with that as well. A basic strategy to deal with that is that you can - and I'll just go back to Gayla's project for a moment here. I don't know what library parts she's got in here. If I go to the Object tool and say Select All, let's see if she's got - she doesn't have any objects in the current project, so we can't really tell. [40:06]

But let me just put in this tree. So there's a tree that's been set up. And I'll flip to a different tree, and I'll just keep flipping to get out of the tree group. by the way, I'm just clicking on this little flip one. That allows me to flip through ones that are in the same folder. Now it's into bicycles and cars but you can see I've got three objects that I've just placed. And I say Select All Objects, it will select them. But you can also go to Find and Select. And when you do Find and Select, you can say, hey I'd like to look for certain criteria like all 2D or all 3D elements. But if I want to manually say the element type is what, object, and I'll add - I'd like to find the object by name. Now here, you can see "The Name Contains", and we can type in something like "Tree", and say "+". And you see it selected these two trees, but not the car; because those objects have the word tree. [41:19]

But I can also just press down here, and it will show me the names of all the parts that are in the current view, in this case, the first floor that are on visible layers. Meaning that they would be seen normally if you zoomed out to Fit in Windows. So what this allows you to do is to see what are the names of all the objects, or potentially doors or windows, or library parts, that are by name. And think about it. If the missing library parts, if ArchiCAD says it's missing, and actually still knows that it's sitting somewhere, and so it will show up in the available names. So the best strategy for finding a missing library part, if you don't know where the heck it was placed, it to turn on all layers and go potentially through each story. [42:14]

So maybe you have a hunch, well that's on the site layer because it's a tree, or maybe you know you're guessing where it is. But go through all the stories with the layers turned on and look at the name list that comes up. And when you have the Find and Select; and of course if you say, "Oh, that's the one that's missing." Let's say this was the one that was missing, and I say OK and I say "+", it would select and we just get a dot. In other words, it wouldn't show the car, it would just show a dot where the car was placed. So this is way that you can find things and obviously delete them or replace them. [42:53]

It's tedious, in certain cases, when your project has been poorly organized, and you've lost control of this, because you may not have to only go through all of the stories but also all of the worksheets and possibly sections, elevations, interior elevations. Basically every viewpoint in the project map. And potentially every layout, these can all potentially can have objects in them. And usually you don't have to go through the entire darn project, but I have had some cases where I've literally gone through every single Project Map viewpoint and every single layout to try to find where it is. And that north arrow, that I resolved for Gayla instantly, that was one of those things that in fact I didn't realize it was a problem, because I didn't know where the heck that was. I didn't know how to fix it until MasterTemplate has that particular north arrow from version 12 still sitting in some of the distributions. I fixed it more recently. [43:59]

Alright so Ted, I hope that answers your question. And let's go on. So you did say, "Can you find it from the missing objects list?" The answer is no, you can see a list of the names, but you can't actually say, "Go find that for me". But you can make note of the names. And then use Find and Select to see if it's in a particular story and then Find it. Alright. Patrick McIlhenney says "The tracking of the mouse seems to be off." I'm not sure if that was something to do with the GoToMeeting presentation or anything else. So I will just defer that. [44:42]

Let's see. Gary Lawson asked, "Using custom wall profiles with sheetrock on each side, he's asking a question about profiles. Is there a way to put doors and windows at the end of the sheetrock and not having the casing out from the sheetrock, the distance of the thickest space, or crown. Okay, so I read that very quickly, so you probably didn't quite get it, but that's a good question. Let me see if I have time for that on the call. I want to go to the one that Anthony posted earlier. And now Christopher Sparks has an interesting comment about the library parts. He says you can use spotlight to do an exact search for missing parts, at least on the Mac OS. So what I believe Chris - let me unmute Chris. Because maybe I should see if he wants to share it. So let me unmute you Chris, there. So Chris your umuted, are you there? [45:39]

Chris: Yes I'm here, can you hear me?

Eric: Yes. Speak up a little bit. So you mentioned spotlight. So tell me, have you used this successfully?

Chris: Yes. Actually, I've had trouble with past libraries having separate parts missing out of the entire group. I'll actually do a search in Spotlight and find the missing parts, and add that to the new libraries if I need to. Say for example, a specific tree is missing. And it happens a lot in cabinets, because they seem to update the cabinets every year. [46:20]

Eric: Okay, so that's a good point. So let me just show you what that means in the Mac, and then briefly explain how you do it in Windows. So if you have a missing part, so basically you'll see in the - do we have the - Palettes, Library Loading Reports. So Library Loading Report, which we had open before, right now it's here. For example, a component that says, in this case it's ambiguous. But in some cases you'll have things that'll say they're mixing. So you can make a note of the name here. [47:03]

Now if this was missing, and it was an individual part as opposed to buried inside a Graphisoft library

container folder, or the main library is in a folder - I'm sorry, in a special type of file that contains lots and lots of parts in it, so let me just back up a little bit and go in. So I'm going to bring up here - let's see, go to ArchiCAD 14, and we'll look at this in a list format. So our ArchiCAD library 14, so this is the library 14 that you would normally load, this entire folder here. And it contains a bunch of sub folders. But most of the objects are inside this LCF file. And you cannot search for them from the operating system, you can't search for them in Mac or in Windows, for parts that are within a library container folder, or the earlier sort of equivalent is PLA. [48:06]

However, there are things for example, like textures. And if I look at flooring here, and carpet, you'll see that carpet alpha, this is a PNG file. Blue carpet, this is a JPEG file. So these are individual files in this case used for textures. But library parts can sit loose like this, inside a folder, or they can be bundled as the LCF. If they are loose, or if they do exist in a loose form, then you can search for them using your operating system. So for example, that one that was "AMT Material Matrix". If I typed in "AMT material", now it's bringing up all sorts of stuff, because it's looking for the contents of the file. But here I can click on File Name, and you can see that it's finding, in this case, a GSM part, which is in ArchiCAD library part. [49:03]

Most library parts will end .GSM, and whether on Mac or Windows. And you can see that it's actually located in the Objects folder in MasterTemplate in the supplemental files here. So if I open up that particular folder, you can see these are some objects that relate to MasterTemplate. So Chris' point is that, if you have missing parts, and you don't want to substitute, you don't want to change them over because they're an older library, and you want to put them into a newer equivalent, then you simply just want to say, "God, that's important. That's something I really want to have in my project," then you may make a note of the file name and then in your operating system, go and search, in this case with Spotlight. And of course on Windows there would be under the Windows Start Menu, there's a search command and you can go and Find file, which has that name. [50:00]

And then this particular file, we can move it into the project embedded library or possibly your office library. And so if we go back, let's go back to the library manager - can we do this by dragging and dropping? It's a good question. Let me just see if I have the Finder overlapping this. If I were to grab let's say this object, this one said it was ambiguous. So let me just grab another one, pen table here, and try this and drop it in - I don't think so. No. Okay, so we can't drag and drop, but we can, let's make a note of where this path is. And then of course I can go and say Add, and then I can go Find that particular place. [50:53]

So this is an AMT supplemental file in MasterTemplate 14 USA library. And we have objects and here's the material matrix. So basically, once you know where it is, you can go find it and add it. Let me just add a different one. Let's say this "Pen Table 1". That's now loading this manually. It's going to be another duplicate by the time I refresh this. So let me just refresh status, "Reload libraries and apply all the changes". By the way, before version 14 of ArchiCAD, you would just say done, and then it would reload the libraries and then you'd get the library loading reports. But in version 14, there's actually there's an option to reload libraries and still be in here. [51:42]

And you'll notice that it says; now there's a duplicate part. There are duplicate parts, and if I do information, you'll see this - I forget which one that I did, but in any event, yes, the Pen Table. So the Pen Table is now duplicated because I dragged it in. So hopefully that wasn't too confusing. Chris that was a great suggestion, just make a note of missing parts, and if you have them on your computer somewhere, you're searching it in Spotlight or in the operating system will help. Anything else Chris? [52:16]

Chris: No. Our older stuff, we had library parts that we didn't keep up with too well. So that's helped us a lot to be able to rebuild those older projects. And also, for some reason, the zone stamp tool, we've had to modify pretty much it every revision of ArchiCAD. It's been a big help really, the Spotlight search.

Eric: Okay. That's a good point and I appreciate your comment. You mentioned the zone stamp, having to rebuild that in later versions of ArchiCAD. And so I will point out that the zone stamp, not everybody uses it. I do think it's very powerful, but only for certain specific needs. If you haven't been using the zone stamp, very briefly, we will be covering that in an upcoming section of the course when we're dealing with program planning and conceptual design, because zones can be used for laying out a sort of bubble diagram of different rooms and functional separations of the project and getting analysis square footage or area. It can also be used to just indicate room names and possibly finished codes on certain drawings. [53:36]

But the zone stamp; if I go and I open it up, you'll see that it allows you on the fly to change the names. So this is the kitchen, or this is Office number 2058. It does have a category here that's from a popup. These categories determine the zone stamp. In other words, conditioned space in sort of a general term, or certain types of rooms or zones in the project. And the zone stamp for conditioned space is set to use, in this case, the zone called "REA Zone ID". This is one that we got permission to distribute with MasterTemplate. It has certain nice things about the way it deals with finished codes and stuff. In any event, you'll see a zone stamp indicated. [54:21]

You can't change this on the fly, you can't choose which zone stamp you want a particular room to use. Everything that's in conditioned space will have a similar style. If I were to change this from conditioned space to storage, I guess all of these would probably have the same one. Let me just cancel this. Let me just show you under the Options, Element Attributes, Zone Categories, here is where conditioned space is determined. That says, which zone am I going to use? And so you may find that as you move a project forward, that it has a zone like - this is zone identifier 14. This is a different way of putting in the name of the room and the number of the area. [55:07]

You may have something that says zone identifier 13 and 12 or something like that, and that may be missing from the project. You will get error messages saying you're missing these things, even if you haven't placed a zone in the project. Just because the definition of the zone categories for all of these zone types is pointing at a particular stamp. And if [the audio cuts out 55:31] and if that stamp is [audio cuts out] never placed it. So this is one of those rare times when you can get a library report saying you're missing something that you've never placed. And that's because it's warning you essentially that if you placed a zone, it might be missing. So that's another sort of hidden place where you can get an

error message. Generally you can ignore it, because if you're not using zones then who cares if it gives me a brief error message. But of course, I recommend that you clean these things up, so that error messages have real meaning as opposed to something that you get used to ignoring. So anyway Chris do you have any other comments before I mute you? [56:18]

Chris: No, that was helpful. Thank you.

Eric: Okay, so let me mute Chris here. And I think that I went through all of the comments that were typed into the questions area. Feel free in the GoToWebinar Control Panel, in the questions area type in something. And if I can, I will cover it during the call. And if not, I do get to see them after the call. I get a report with all of the questions that were posed. And so I can at least make a note of something. Alright, so we're an hour into the call. And we've done a different pattern here where we - I've got Gayla's project sent in ahead of time, and then I went to all of these questions that you did on the fly.

Now let me switch back to another one that was sent in ahead of time. And that is Bethany had a question about let's see, how do you do some complex shapes like these turrets or spires, and how do you do the - open up another one of these, let me go see, there we go. Okay, so I've got - other one here, okay. So what we're seeing here, little bit larger - let me see if I can view this. Zoom in. Obviously we've got this slightly curved shape. Now if you can't see my cursor, oh yeah, you can see my cursor. That's interesting, oh my god. My cursor -oh, I see what Patrick is referring to. My cursor - if I'm pointing to what I'm seeing, it's not exactly what you're seeing in the GoToWebinar panel. That is very odd. I don't know if that's happening all the time or not. I do have my secondary computer, where I can see what you're seeing, and I'm pointing at the left hand turret, and you're seeing my cursor over in the middle, pointing at a window here, that's very odd. [58:49]

So I'll just describe it in words. So obviously, these turrets or spires have a curve to them, so they're not just conical. They have a curve, and for some - let me see if I can go - there's another one that's a straight. Yes so this one, if I zoom in, can I? ... So if we look at the area - now is my cursor going to be the same? No, it's actually different. But if we look at the right side of the roof, you can see that it's curved. So obviously, the roof is not a straight segment, it's either bent or curved, I'm not quite sure. And of course, sometimes you'll have a roof that will go in with one angle, and then make an abrupt change to another angle, and sometimes you may have something a little bit more sculptural that gradually curves. [59:52]

So while I can't answer all the questions that Anthony has posed, I will try to show you a little bit about roof construction and complex profiles that may be relevant. And will at least be helpful Anthony as you move forward with it. I'm going to unmute you, if you - there you are. Okay, now Anthony, I can't unmute, you because you never punched in your audio code. So although I can see that you are attending the call, the phone icon that I have for controlling it is gray, so you if you look, I'll just take 1 minute to just give Anthony personal instruction. If you look in your control panel for the GoToWebinar, you'll see there's an audio code, and it's usually two digits like 25 or something. You would then press down that number and the pound sign on your phone, and then it would know which phone line is connected to your personal there. And if you do that, then I'll be able to unmute you. But I'm still seeing

your line is grayed. So, it's also indicating that GoToWebinar is not your frontmost window, so it's possible that you may not actually be watching the call. So you'll have to catch it on the replay. [1:01:25]

Anyway, let me just see if - Okay. So a couple other questions that came up. John Gilchrist asked, "Can I make my own zone stamp?" Yes you can. I'm not going to be able to address that in this call, but we will look at creating custom library parts later in the course. And I may try to include something about a zone stamp. And Frederick Hoag says, "Simple question. But it is vexing. How do I reduce the size of PDF files that ArchiCAD outputs, my PDFs are always huge." That's a good question. I'm not sure of the answer to that. So I may have to do a little research there. So anyway, now Anthony, I see you are now green there, so let me unmute you. Anthony are you there? Hello Anthony? [1:02:19]

Okay well, Anthony you are umuted, if you do come back to the phone. Hello? Anthony? Okay, well I can hear some background sound, so maybe Anthony will speak up. Okay. Let me go back to ArchiCAD and we'll proceed with this. So in fact actually, let's go. I have another copy of ArchiCAD open on this plan I think. And let me just draw a simple box of walls here. And we'll put in then a roof, using the polyroof method. And let's just see, the walls are going from zero to ten, so when I do this polyroof method and I either click this series of the points around here or use the Magic Wand to trace it. It will then say, "What height?" [1:03:20]

I need to coordinate that to 10 feet, would be the pivot line, which might be the plate height. And what sort of slope do I want, and what overhang. I want to make it a bigger overhang for presentation purposes. Say OK, and if I go to 3D we'll see something very common or standard in terms of this. Now these roofs here, I'm going to actually change the slope to be much steeper so that it will be easier to demonstrate things. By the way Anthony, are you there? Hello Anthony? [1:03:56]

Anthony: Hello can you hear me?

Eric: It's very noisy like you're in a wind tunnel.

Anthony: [inaudible]

Eric: Okay I really can't understand, you're distorting a lot. Alright. So that looks like Anthony has hung up, and is probably going to dial back in. So I'll proceed on here. I'll just select all of these roofs and change their slope. Now I can just type in a new value here, or I can go into the Roof tool and perhaps change it. Here I have the option of doing it in terms of these different percentages or in the rise over run. In the main dialog, I only have actually a degree here. Let me just make this 12 and 12, so it's going to be 45° angle, and you can see now that we've got a much steeper condition. Now how would we make this bend is the question? [1:05:08]

So the answer is that there is no automatic way, you basically can have up to do something more manually, so let me draw a building off to the side that would be similar and we'll do a quick. So I'm just going to draw something similar here. And I go to the Roof tool. And instead of doing this with the polyroof, I'm going to draw a roof manually. And I'll say that maybe it's going to start, I'll just do arbitrarily 20° here to start out with. So I'm drawing one piece of roof, and then I'll do the same -

actually I'll just flip this. I'll select and say move, Mirror a Copy, go to the center line of this wall.

[1:06:02]

Now let's see. I need to do my snap halfway along entire element. That way it will give me the snap along the wall, as opposed to between where the wall meets the roof there. So now I can have a snap here. So, now I've got these two pieces, and if I go to 3D of course and Fit in Window, we're going to see that two there - now if I go and create- now where this break line is you can of course measure dimensionally when that is. I'm going to - by the way, I see Anthony came back in. Let me try to unmute him. Anthony are you there?

Anthony: Yes, Eric. Can you hear me?

Eric: Oh that's much better.

Anthony: Sorry about that guys.

Eric: So Anthony I am going to demonstrate a couple of things, and then I'm going to ask you for more input. Let me just go on here. I'm going to say that I would like to do another piece of roof that starts here and goes up. And I'll take this up perhaps to the halfway point. So I'll bring up to the halfway point. Now if I look that at this in 3D, we're going to see that it's rather odd, it's not going to look good at first. Why? Because this roof here, although I started it in line with the end of the other roof, its height is not correct. So what I can do is I can simply going grab this and change its height up to the top here. Now it's continuous, but of course I can also change the slope. Now I can type in the slope here, and I'll say 45. Or I can literally just grab it and use this option, this special option on the far right of the Editing palette that's adjusting, and you can see now that I can move this up. [1:07:55]

Now again the cursor, I'm seeing that the cursor, you're not seeing my cursor move on screen as much. You are seeing the results so. Anyway I'll just move this down to something perhaps a little bit more plausible here. And if I rotate this around, we're seeing something that's a little bit odd, and that is - and let me just actually mirror this so we can get the "complete package". I'm going to right click and say "Mirror Copy", and not everybody knows that you can [audio cuts out] a lot of [audio cuts out] the same [audio cuts out] into the roof, and clicking on the other end of the roof. In other words, I'm snapping to the two endpoints. So basically, using the ridge line as my mirroring access, and finish the operation. [1:09:00]

And you can see that now I've got this roof that's got a slope. Now of course there are many things you can do design wise to that you might prefer to do, but one issue that's certainly just basic geometry has to do with the fact that the two roofs are meeting at the bottom, but not at the top. Why is that? Because the roof is not defined. If I look at this, at any roof, and I open up its settings, it's defined by either its cross sectional thickness or its apparent height along its edge, in terms of the vertical eve. Now it actually remembers the cross sectional thickness if we change the slope. [1:09:49]

So obviously if you have a roof built out of 2x10s, and you change the slope from 4 and 12 to 6 and 12,



then it is appropriate for it to remember whatever that thickness is, and just recalculate the slope. I'm sorry, the vertical eve based on that. But in this case, just for quick presentation purposes, what I'm going to do is literally go and change the height. So I'm going to go and select the roof, and use the option that says I want to change the thickness. And you can't see my cursor, but you can see that I've highlighted the right hand top right option that has the change of height, and now I can move this up or down. [1:10:35]

And if I move it up too high, you can see that I'm making a very, very thick roof. And I'll take it down and snap to the roof, the other roof. And so now what you can see is that I've made the roof thinner, so that it has the same bottom and top, even though it's changing the angle. So I don't know structurally what you would want to do, but I can literally go and just change that. Although this would be a little bit tedious and trial and error to get the slope to the height that you want, you can certainly get this to represent a roof that has more than one slope. Anthony does that help a little bit?

Anthony: Yes it does, thank you very much.

Eric: Okay, so one issue with this. If you did have two or three or four roof pieces making this curve, is that this line that you can see in red across there is going to show up in an elevation. So if I go to the south elevation for example, and that was weird, it came up on my other screen. Let me move this over and - huh. Oh boy. That just sort of disappeared behind everything. Let's see, here we go. Okay, now at least it's - let me move this down. Alright. So, we're seeing the roof planes with - actually let's Fit in Window. Okay, this is looking at the other roof. So, this is the south elevation here that was looking at the other building. Let me just drag the elevation, or actually I'll just stretch it over. [1:12:43]

And then we'll open that, and we'll look at the two elevations side by side. And you can see that there's an extra line across there. And so you will see in an elevation these things, an extra line indicating where the plane changes. And so that is something that may be a visual issue. If you really don't want that line to show, probably the best way to deal with it would be to put a white line. So this is a good trick, and I'll be dealing with tricks like this later in the course in terms of cleaned construction documents. I'll use the line tool, I'll select the line that's white. So here you can see one that's highlighted. You're not seeing my cursor properly, but you can see I have highlighted 1091, which is the white pen. [1:13:32]

And if I draw a line, let me just choose a layer. I'll just put it on the ArchiCAD layer. So I just drew it partway along, and you can see that it's covered up the area that was done. So in the elevation, we can remove that. You can see how the red line is not showing up where I drew the white one. So that would be a quick way to mask that in an elevation drawing. So, I'll move on to the turret in a moment, but anything else about the roof shape, Anthony? [1:14:15]

Anthony: No. That sounds great Eric. Thank you for pointing that out, I appreciate it.

Eric: You're welcome. I guess a final thing just in terms of this is if I go to the east elevation here, and let me go and move the east elevation to where it would see the building with the broken roof, or the multiple roofs here. You can see that the roof slope can be selected here. I can actually go to this roof. And you can see that the roof slope, I can actually change the angle. Sometimes you have to click on

these things more than once. So I can change the angle of this roof right here in an elevation or a section. [1:15:03]

Now why this is particularly important is that you can draw your desired roof shape right here just with line work, or copy it from a reference, anything you'd like. And then you can make your roof slopes work. So for example, let me just make this a little bit in between. So now I've got this. And suppose I wanted then to get this roof here to match that. Well, if I'm at the pivot lines, so basically the bottom of the roof is where I drew this, I can't actually change the slope but I can say I want to move it in space, and I'll move it up. And then I can change the slope by using the option here, and perhaps snap it. [1:15:57]

So what you can see is that right in the elevation, I can literally adjust, and if you have 2, 3, 4, 5 different roofs, you can literally go and make sure that either their bottoms are aligned or their tops are aligned properly under there. Probably the tops would be the most visible thing, because the bottom might be hidden inside the framing if you don't have a cathedral ceiling. But being able to literally select this and go and change the slope to whatever is going to be appropriate, and then take this one and move it up into position, and then adjust this one slope, so you can see how you can more quickly get a desired shape that you would specify precisely using, in the drafting area of the elevation. Does that make sense? [1:17:02]

Anthony: That does. We could take a look at the worksheet if we wanted to. And then an actual image, and then trace, I know you've done it before in your seminars, so...wow, that's awesome. Thank you very much. That answers my question.

Eric: Okay great. So I wanted to get to your turret one in a moment, but I'm just looking at other questions that were typed in. Bruce Stewart writes, Eric is there an available exterior awning type Bahama shutter, hinged at the top for windows which is parametric and therefore can adjust the parametric window elements when they are moved or resized, and he goes on with a bunch of things. I don't really know, I'd have to look your question in more detail. I don't have an instant answer on that. [1:17:48]

Perhaps Bruce, could you send me an email with not only this question, but perhaps a reference to something online so I can understand the - what that type of window Bahama shutter is there. Okay Robert Fisco wrote, Eric in the multi roof, I think there is an option to have multiple levels. Okay, that's a good point Robert. Let me see if I can unmute you, if you're still there. By the way Robert is calling in from Australia. So Robert you're unmuted are you there?

Robert: Yes I am.

Eric: Hey! You sound perfectly clear. Amazing. What time is it there?

Robert: 6:20 in Australia, in the morning.

Eric: 6:20 in the morning.

Robert: [inaudible]

Eric: Right. Okay, so our call started for you at 5:00 AM and did you get in on the beginning of it?

Robert: Yes, I did Eric.

Eric: Very dedicated. Robert, I also want to thank you for your very insightful comments on the course website. You've made a few very nice ones, and in fact you posted the comment that won the "Best Comment Award". So I've already talked to you personally, but I just wanted to say it on the call, so thank you very much.

Robert: Thank you.

Eric: I did send out the prize, the iPod nano, did it come yet?

Robert: No, it has to come yet, but it's probably in the mail somewhere. [1:19:25]

Eric: Okay. I hope the mail delivers it soon. Okay, so your comment, very good comment. Let me just go back here. I'll just delete these roofs and start this particular one over. If I go to the Roof tool, and I go to the Poly roof option up at the top; and it's so weird that the cursor is off on here. It may have to do with me having changed resolutions after I started ArchiCAD, I don't know. So I apologize. Hopefully you've been able to follow most things fine. But I'm going to go in and use the eyedropper. Let me use the eyedropper. You're seeing the eyedropper way off to the side. I'm going to eyedrop the left hand building, so while it looks like my eyedropper is way off to the right, I'm actually eyedropping the left hand rectangle group. [1:20:25]

You'll notice that it says poly roof number of levels. We can actually say that I'd like three levels. And all of the sudden, these other ones will show up. And so if we're starting at ten feet, then I can say that the first level is going up 2 feet above that, and the next level might be another 4 feet, and the next one I'll just say go as high as you need to. So I could just type in something rather large like 50. And it will basically go until it hits another roof. [1:20:53]

And we can't control the slopes, but we can control - I'm sorry, we can control slopes. So here's five and 12, and let's say this goes up to seven and 12. And then it goes up to 12 and 12 or something like that. So let me say OK. And so you can see that instantly, it created something with multiple pieces and slopes. And if I go to 3D, ah. Very good Robert, you win another prize for that. Because look at that. In a single step, and maybe it's easier if I switch my 3D viewing mode to internal engines, where we can see that. You can see that by simply specifying how high we want to go to the first run, in other words, I said go up 2 feet at a certain rise over run. [1:21:44]

So it went whatever that horizontal distance was, it didn't necessarily go there. And then I said go at a steeper one, up to a new level, and then change there. So with a little bit of trial and error and practice, you can quickly make that shape. Awesome. Thank you Robert.

Robert: Thanks. [1:22:06]

Eric: You can take a bow.

Robert: If you like doing bell shaped roofs.

Eric: Alright. So Anthony, there you have something even quicker, although I'm sure all the things that I showed you relate, in the sense that there are times when you want to be able to adjust things manually.

Anthony: Excellent. Thank you Robert and Eric. This is incredible and makes it so much easier. Now I'm going to get a chance to try it on my project.

Eric: Good. Well, just as a very quick review of how I got there, because that was very quick. Let me go back to the floor plan, and I'll just draw another box of walls here. Actually, let me make this even more complicated, just to show that it really can be used. So now I've got a more complex shape, not super complex, but more complex. And I'll use the Roof tool here, and I'll go and use the eyedropper. And I'm putting the eyedropper on that area that I'm just drawing. And again, it's basically you're using the poly roof method, which is that third icon in the roof geometry. [1:23:27]

And I can specify how many levels. Although it's blinking and it's empty, it basically remembers that the last time I did it I wanted 3 levels. The first one is the two foot, basically going up in 4 feet. Let me just take this maybe just to 3 feet so that it will have more chance for it to go up at a steeper angle. And then in the last one you just want to make sure that it goes up high enough to get past whatever the ridge line would be. Now if it's not high enough, basically you'll end up with an opening. In other words, your roof will just sort of stop dead, and you'll have the space where either the rain would come in or you'd have a flat roof perhaps to deal with. [1:24:11]

So let me just say OK and you can see how bang - I love that word, bang, go back to 3D, and there you have your chateau.

Anthony: Wow.

Eric: Okay, now of course you're not going to want every single nook and cranny have this, so you don't want to necessarily trace every wall using the magic wand. And there are going to be sometimes when you're going to want to take the end off and make it a gable instead of this combination of things. So when we look at roof editing, perhaps you already know how to do this. But we will want to do that. And maybe just for the heck of it, I'll just get rid of these and say let's make this a gable, so I would do that. And again here's a quick, and you can do this right in 3D. I can go to the top one here, see you can't see where my cursor is, but I'm pointing at the very top ridge point that has to adjust. I'm going to choose the option that is the moving just the one point. [1:25:21]

I'm going to use the shift key to lock it in a straight line. So now I'm moving it in or out straight. And then I will snap. I'm snapping to the end of one of the lower roofs. You can't see my cursor, but you can barely see the dotted line going off to the left. And I'll click, and that line got exactly right. I'll take this point, which is the lower point of this roof that needs to be adjusted, and again move it. And I'll just take the shift key to lock it. And now I've got that piece extended and I can now snap this one, and this one,

each one of these. And I'm doing this all right here in 3D. Obviously, I could do a lot of this in 2D, but it's so much more satisfying to do it in 3D. And you can see that now I have a gable that - let me take 30 more seconds to finish that editing. And I have to use the shift key each time to make sure that I'm keeping it going straight, I'm basically extending the line of direction of the ridge or wherever that part of the roof is. [1:26:47]

And finally got that in. And how would we get the wall to fit under there? I simply select the wall and tell it to be tall enough. Let's say 20 feet or maybe 25 feet here. Now you can go and use the Design menu and say, Trim to Roof, and that will work. I say trim top. But if the roof changes slope, for example, I make it taller, we now have a gap. So let me undo that and show you the better way to do this. So I'm going very fast. I'm going to change the wall to the better way instead of going Trim to Roof, which makes a cut that will have to be undone manually. [1:27:45]

I'm going to go to Solid Element Operations, and I'll go here and say this wall needs to be modified, it's the target. And these roofs are the operator or operators. And I'm going to use subtraction with upward extrusion, which is basically the same as trimming the standard roof trim. It subtracts wherever these roofs intersect the wall, and everything above the roofs. And I say "Execute", and we'll get the same result, in terms of a neat thing. But now, if I did change this roofs slope and take it up higher, you'll see that the wall actually fills in the gap there. And if I take this other roof and take this up there, likewise the wall will just extend or the reverse direction if I take this down, the wall just stays trimmed. [1:28:48]

So that's another tip in terms of trimming walls to roofs, is instead of using the trim wall to roof, which dates back to very, very early ArchiCAD; you use Solid Element Operations which was introduced probably in ArchiCAD 8. And certainly is a little bit more complicated. You have to select the roofs and the walls separately, [audio cuts out]. I guess Robert or Anthony, before I do the last thing I'll just do a quick turret. [1:29:30]

Anthony: That answers my questions 100%. I'm just blown away at what you guys are able to do. I've been honestly beating my head against the wall for the past six months trying to figure it out.

Eric: Right. Okay, well I'm glad to answer it. I do see one that's question that was typed in by Ghali Jabri. Where are you Ghali? I remember you being in Morocco or something like that, I can't remember. Let's see, are you - let me unmute you in case you can say hello. Ghali, where are you? I'm sorry, where are you? [1:30:05]

Ghali: I can hear you.

Eric: Okay Ghali, I heard you for a minute.

Ghali: Morocco.

Eric: You're in Morocco.

Ghali: Yeah. I can hear you great.

Eric: Okay, well. This is awesome. We have Robert from Australia, you're from Morocco. Of course we have a lot of US people. That's fun. Okay, so Ghali, you said with the roof with two sloped angles, could you explain how to deal with rafters. [1:30:40]

Ghali: [] Rafters, creation.

Eric: That's a very good question. I don't have an instant answer, but I will direct you to a tip, an ArchiCAD tip that I did on the MasterTemplate website and has to do with rafters. So if we go to the MasterTemplate website, which is ACtemplate.com, and we go to the video tips, there is one that says "Creating Rafter Tails". So this may not answer your question. [1:31:14]

Ghali: Yes I've seen that tape, but this is for normal sloped roof. If you have two or three steps on the roof.

Eric: Okay, since not everybody has seen this, I won't play it of course, but I'm just going to jump it up to the segment that will just explain what this is focused on. You can see that - and I'll just stop it right there. You can see the rafters tails sticking out from underneath the roof. These are done with either the Beam tool or an object. There is an object in the library that is for - actually, there are different objects that can do slanted volumes like this, and then they're carbed at the end using the Solid Element Operation to take off the end to make it ornamental. [1:32:08]

To do something that would be sloped, then you would basically need to make more than one of these. And just like I ended up with two or three roofs that were carefully aligned to each other, I might create two or three rafters. The other possibility would be to create a complex profile that would follow the changing slopes of the roofs. And so you basically would be creating, if you think about what you would draw in a section that would show that rafter as it changes slope to support the roof, that shape would become a complex profile that you would then be able to put in as a single element. The complex profile would probably be very long in the sense of from the ridge of the roof to the eave it might be 10 or 20 or 30 feet long overall, but it's stepped. Meaning when you draw it on the floor plan, would only be the thickness of the member. So it might be an inch and a half, or what would that be in centimeters, 4 cm or 6 cm, or three and a half inches or whatever. So...[1:33:22]

Ghali: The ArchiCAD rafter creation, the automatic rafter creation plug-in...

Eric: That's a good question. For those of you who haven't worked with it, there's a powerful tool that will - we can do a very quick check on this. If I select - I'm going to select - actually I'll just select all the roofs - no I'll teach you something if I use the marquee tool. Then go to the roof tool. I can select all the roofs in the marquee, not everybody knows you can do this. You can draw a marquee around an area and then go to a tool, and just by hitting Command +A or CTRL+A, I can adjust the ones that are within that marquee. [1:34:08]

Now under the Design menu, there is RoofMaker, which allow you to create individual rafters or multiple rafters. And then there's the Roof Wizard, which will do a whole bunch of stuff all at once. Which you can then say, well, that's a good starting point. Let me move and adjust and add some double

framing and other things. But if I go to Roof wizard, it gives me controls for how these rafters are set dimensionally in colors and size. I'm just going to leave it in the default and say OK. And let's see what the heck it does. It's thinking about it. I've got a spinning beach ball. Hopefully it's just thinking. [1:35:02]

Actually it completed it, look at that. Alright now I'm going to go to the Object tool and say Select All Objects. So I've just activated the Object tool with Command+A, now I've selected a whole bunch of things. You can see all the handles. And I'll go and say, show just what's selected in 3D. So I don't know if this is exactly what you want, but...

Ghali: Exactly. Exactly, yes. It's pretty accurate.

Eric: Okay so there you go, you can use the Roof wizard to create some things, and then adjust them. Because each one, and the nice thing about this is it's not an object. Each one of these - whoops, actually if I suspend groups, so suspend groups, I've just activated that or turned that on. And if I now select, you can see that individual elements can be deleted, moved, changed, doubled up, whatever. [1:36:09]

Ghali: Thanks Eric, that's great.

Eric: You're welcome. So Anthony you had the question - let's see about the turret. So I'll just finish up the call with another little demonstration. Let's see I got out of ArchiCAD accidentally. And so if I take a piece of roof. And I'm just going to do this very quickly. There's two ways that I would do a turret. One is that - let me just - I guess I can do this arbitrarily. I'm going to pick a roof like this. Actually no, let me just draw a circle, because it would probably be a good guideline. Let's say we wanted to have a - now why did that - oh, it's white. Let's just make it black here. [1:37:11]

So I've now got a circle. Let's say that this is the size of my turret there. And I'm going to go to the Roof tool, and say that I'd like to create a piece of roof. Let's say that it has its pivot line here. So in other words, it's horizontally determined there, and it's going to go up towards the center. And then I'm going to take a little a piece of this and go up to the center here. Let's see, so this is a little shard, if I look at it in 3D, you'll see it's just it's a little piece of roof here. [1:37:53]

Now this - I actually I should really subdivide this circle. So one way that we can do that is go to the Snapping options here, and say Divisions, we're going to say Set Special Snap Values. Let's say that we do 18 divisions here. And then you can see as I go along here, let's see Divisions here, 18. And you can see now there are a bunch of little tick marks along there. So let me actually take this roof and adjust the endpoints to be one sliver. And actually I guess it should be - let me just rotate the pivot line. So this pivot line here, I'm going to move out of the way. [1:38:55]

So this is where the horizontal line is. I'm going to put it right of top this. So now this is a sliver that is perpendicular. There are different ways to do it. I'm moving quickly. Let me just go and move, multiply, and then we're going to need 17 copies. And I'm going to distribute it minus 1. That means it's going to do 17 going from beginning to end. And I'll tell it where it should start up again or reach. If I go to the centerpoint, oh, and not drag. Sorry. Move, multiply. I need to rotate. So distribute one, minus one. I

need to show it from the beginning to the end, but the end one already has one there. I'm not sure they should be 17 or 18, but let me just see. If I go from here around, see you can see as I gesture around it's creating this. And I'm not quite sure. Okay, let me try this here. [1:39:59]

And, if I go now to 3D, so these guys, no. So basically, what you need to do is do a little bit of drafting to figure out how big your segment is, and then multiply it around in a rotation. And of course these, one of the nice things about this is that you can, if I select all of these, I can change its slope. So if I change it to 30 degrees, all of this goes up to the new slope. And if I just change this to open GL Engine, you can see that it's actually doing a reasonable job of creating the texture on it. And if you did want to make it have that gradually change in slope like the other roofs, then you would, instead of having one sliver, you would have multiple slivers. In other words, two or three or four roof pieces. And then those, that assembly, would be rotated around in a circle. So how is that? [1:41:23]

Anthony: That's great Eric. Thank you so much. I really appreciate it.

Eric: You're very welcome. I'll mention that you can use the Profiler, which is under the Design menu, Design Extras. And there's something called Profiler which is gray right now because I have to be in the floor plan to be able to access it. But it will allow you to create a profile shape and rotate it around in a lathed form. Perfect for doing balusters and similar shapes. You could do it for a turret like this, but its texture might not work properly in terms of the roof tiles. And you couldn't cut a hole in it. With this one, you actually could cut a hole for skylights or something like that. So there are some limitations, but Profiler could be used for doing that. That would be an alternative to this. [1:42:18]

So we've got an hour and 45 minutes. So I gave you a little bit of extra time. So yes, I've got a few of you unmuted. I'm going to unmute everybody, can I do that? In case anybody wants to just say - how do we do this? Unmute. So if anybody else wants to make a comment before I go.

Anthony: Eric, this is Anthony Eason in Virginia. When will this be available online?

[audio cuts out for several minutes]

Eric: Hello everybody.

Male: Hi.

Eric: How long did you lose me?

Female: About 5 minutes.

Eric: Thank you for putting it in the comments box. I apologize for keeping you guys hanging. So I was explaining something here. I guess you saw some stuff on screen about materials. So just to give you a quick recap of what I was trying to say. Marek Stoklosa had asked a question about - sorry - doing different colored treatments for a building to go over with a client, well we have this option or we have that option. So one thing that you can do is you can use Attribute Manager which I've opened up here and you can select Materials, and you can create a separate file that records the current state of those



materials. And this file, which is untitled, I can say Save, and give it a name. And this might be "Color Scheme 1". Let me just put this on my desktop, perhaps here. [1:44:18]

And then I can go in, this is "Paint 05 Gray", and let me just go in, instead of Attribute Manager, go to Materials, and find "Color Scheme". Let's see, "Paint 05 Gray". And let me just change that gray to a red. And maybe even rename it to be "Paint 05 Red". And so now, if I have something drawn in there, let me just go select all of these roofs right now. Just say select all these roofs and make their edge color 05 Red. Alright, so now you can see they're red. [1:45:12]

So I've redefined everything that used that particular material, and then later I could go into the Attribute Manager and I can go say, you know what? I'd like to open that file that was on my desktop that was "Color Scheme 1", and I can perhaps bring in one or perhaps more than one of these materials if there's several that are coordinated. And I could overwrite. And now when I do that, and I say OK, it will tell me that I'm modifying this one. And you can see it's back to gray. [1:45:50]

So essentially what I've done is I've changed the definition, or have recorded the definitions of any number of materials that I wish in a separate file, then I have the freedom in the current working file to redefine them as needed. And of course, if I want to record that condition, I then save that out, those materials out, in a "Color Scheme 2", "Color Scheme 3". And at any given time, I can then swap in an entire color scheme doing that. Does that answer your question Marek?

Marek: Yes, yes it does. Perfect. Thank you.

Eric: You're welcome. Okay. So, alright. So we've finished up. So we went, well, we went for a while and I think we've covered a lot of ground. Any final comments from any of you?

Male: Thank you very much, that was awesome. [clapping]

Eric: I appreciate your applause and hopefully the recording will work. So let me finish this up now and I'll be in touch by email shortly. Take care.